

**THE
RAILWAY GAZETTE**

A Journal of Management, Engineering and Operation
INCORPORATING

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DISPATCH OF "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE possesses the necessary permit and machinery for such dispatch, and any reader desirous of arranging for copies to be delivered to an agent or correspondent overseas should place the order with us together with the necessary delivery instructions.

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas, as they are stopped under the provisions of Statutory Rules & Orders No. 1190 of 1940

TO CALLERS AND TELEPHONERS

Our office hours until further notice are:—

Mondays to Fridays - 9.30 a.m. till 4.30 p.m.

The office will be closed on Saturdays

Dr. Merz

THE sudden death on October 15 of Dr. Charles Merz removes one of England's foremost engineers. Dr. Merz had gifts which would have led to success in many walks of life; he chose engineering, in which he achieved a leading position. He was a pioneer of railway electrification and the conversion of the Tyneside lines in 1906, under his advice and in conjunction with Sir George Gibb, was almost the earliest case of the kind in this country. Subsequent and much larger schemes were carried out by his firm at Melbourne, Buenos Aires, Cape Town, Bombay, and in Natal—the two last-named involved important conversions of main lines. The Natal scheme included the longest electrified railway in the Empire. Dr. Merz was also closely connected with the legislative and technical developments of railway electrification and electric power supply and sat on various committees and other bodies dealing with these matters. The Weir Committee on Railway Electrification was the outcome of proposals made by him to the Government, and his firm from time to time reported for various British railway companies. He took an equally important part in the extension of electric power supply, both in connection with broad questions of policy and in the development of innumerable technical details incidental thereto. Thus, the setting up of the Grid and of the Central Electricity Board were originally proposed by him, while he contributed much to such developments as the perfecting of iron-clad switchgear, protective devices, low temperature distillation, and turbo-alternators, and in fact all the details of power station design and transmission systems.

* * * *

Mr. W. L. Hichens

During the past week sudden death has also removed an outstanding industrialist, Mr. William Lionel Hichens. He was born in 1874, and while still a young man, had rendered valuable public services in the Colonies and had gained a wide experience of affairs from his work on varied Government commissions and committees. During the last war he went to Canada on behalf of the Minister of Munitions and organised the Imperial Munitions Board. For the last thirty years he had been Chairman of Cammell, Laird & Co. Ltd., the famous shipbuilding and engineering firm of Birkenhead, and later became Deputy-Chairman of the Metropolitan-Cammell Carriage & Wagon Co. Ltd. Among the other directorships of outstanding industrial undertakings held by Mr. Hichens were those of the London Midland & Scottish Railway Company and of the English Steel Corporation. He was widely known as an economist and for his deep interest in the welfare of those employed by the companies he served. His high character, power of leadership, and commanding figure, with all of which he had been endowed since his youth, made of him a leader of British industry whose place will not readily be filled. Allied with his sound commonsense, his immediate and clear grasp of essentials and his personal charm formed a combination which were responsible for the outstanding success he achieved in two so widely divergent spheres—the Colonial Service and the company board room.

* * * *

Increased Charges and the Railway Agreement

The Minister of Transport has decided that all charges, with the exception of workmen's tickets, season tickets, and the ordinary fares of London Transport (other than coaches) should be increased by approximately 6 per cent. This will raise the general level of railway charges to about 16½ per cent. above that ruling immediately before the war. The proposals which the Railway Executive Committee put before the Charges (Railway Control) Consultative Committee were for a general increase of 6.8 per cent., which would have raised the overall level to 17½ per cent. above that of pre-war. The report of the consultative committee has not yet been made public and at this stage it is not

possible to conjecture how far the new advance in charges, which is to be effective from December 1—in view of the important exceptions—will go towards meeting the higher costs which the proposals of the Railway Executive Committee were designed to offset. It will be recalled that the advances authorised before the recent application was made were estimated to produce £29,500,000. The proposals of the R.E.C. were calculated to increase the yield of higher charges generally to some £44,500,000 by the end of September of next year. That was based on the assumption, too, that the higher rates proposed would be effective from October 1. This decision, though important, must nevertheless be regarded only as an interim arrangement, as we understand that the whole basis of the agreement between the Government and the railways is being subjected to drastic overhaul in the light of the recently-announced Government policy of universal insurance against war damage.

* * *

Taxation and Savings

At the annual meeting of the United Steel Companies Limited the Chairman, Sir Walter Benton Jones, was able to give an excellent illustration of a point which to a greater or less extent affects all businesses which are in any way engaged in the present war effort. He showed that of the profit available of £2,256,078 no less than £1,493,000 or 66 per cent. was required to meet tax payments. Sir Walter lodged no complaint at the extent of the taxation which the undertaking had to meet, but he pointed to the truth—the consequences of which sooner or later will have to be faced—that excessive taxation drains away the savings which are the only source from which industrial undertakings can maintain a state of efficiency necessary to keep alive. No reduction of dividend was necessary to meet these payments in the case of the United Steel Companies, but obviously only the strongest concerns can make the full provision for the depreciation which is needed because of the more intensive use of equipment, and at the same time maintain payments to shareholders. To succumb to the temptation to make an inadequate depreciation allowance can result only in impairment of strength, which neither the business nor, indeed, the nation, can afford. On the other hand, full provision at the expense of shareholders whose works are taking a vital part in the war effort amounts to double taxation. It is for this reason, of course, that so many and such strong representations have been made for adequate depreciation allowance in the framing of the tax structure. It does not arise from a desire to escape taxation but to an appreciation of the vital need for preserving plant in an efficient state.

* * *

Carriage and Wagon Accessories

As was briefly recorded in THE RAILWAY GAZETTE of October 11, the important and varied trades which cater for the supply of railway carriage and wagon accessories have formed an export group, of which the Chairman is Mr. N. H. Morris, a Director of J. Stone & Co. Ltd. The group has been formally recognised by the Export Council and membership is open to all manufacturers of carriage and wagon accessories. The significance of this is that members of the group will receive allocations of raw material for implementing orders from overseas. The formation of this group is welcome, for in the past those to whom membership is open have contributed substantially to our overseas trade and there is no doubt that even during the war there will be considerable scope for their co-ordinated activities in the expansion of our exports. It must not be overlooked, either, that after the war there will be a great deal of advantage to be gained from the close contacts which must ensue from working within a group of this kind and from the opportunities which will present themselves for collaboration. The formation of these export groups—there are already a number which cater for various branches of railway activities—will inevitably lead to better understanding and perhaps closer association between manufacturers engaged in similar fields of activity. The experience gained under wartime conditions should also make for a less individual approach to

problems which may prove easier of solution if they are tackled collectively.

* * *

Wagon-Builders and War Contracts

Some of the special difficulties encountered by Hurst, Nelson & Co. Ltd. were explained at the recent annual general meeting by the Acting-Chairman, Colonel A. M. B. Grahame. In the earlier part of the year to July 13, 1940, there was need to reserve capacity in contemplation of certain Government requirements in rolling stock. Later in the year, when the company was well advanced in its arrangements for the construction of a large number of covered wagons for service in France, events in that country occasioned cancellation of the contract. At that point, despite the difficulties experienced in securing deliveries, the company had accumulated large quantities of the materials and parts which were necessary to ensure regular large scale output, and it had produced its first consignment of completed wagons. In consequence of an immediate reduction in output and of the eventual cessation of work under this contract, active steps were taken to adjust the position; the company is already engaged on alternative output, and can visualise early return to full capacity. Last year the company's simple hired wagons were requisitioned by the Minister of Transport, thus interrupting the normal course of its wagon hiring business. Since then the terms of compensation payable under the Requisitioning Order have been settled upon a reasonable basis.

* * *

International Sleeping Car Share Trust Limited

The principal asset of the International Sleeping Car Share Trust Limited is a holding of £5½ millions in shares of the International Sleeping Car Company, which is registered in Belgium. Owing to the war the only revenue for the past year to May 31 was a few hundreds for interest, and the loss of £2,600 shown is for the most part due to a claim for income tax amounting to £2,200 representing adjusted tax in respect of the profits of the previous year. After deducting this loss a credit balance of £13,900 is carried forward. For the previous year a dividend of £8,300 was received from the Sleeping Car Company, and the net profit was £5,600. No dividend has been paid since 1 per cent. for 1930. No information can be given regarding the position of the Wagons-Lits (Sleeping Car) Company, which has not issued any report or accounts. The annual meeting, convened at first in Brussels and then transferred to Paris, was not held for obvious reasons. Similarly, the shares owned by the trust held by an English bank in Brussels were removed to near Bordeaux, but those in Paris presumably remain. The reduction of capital recently authorised has also been postponed.

* * *

Nasmyth Wilson & Co. Ltd.

The last report of Nasmyth Wilson & Co. Ltd. before the company goes into voluntary liquidation has just been issued. In THE RAILWAY GAZETTE of June 14 the decision of the company to dispose of its lands, building, and plant, together with stocks and work in progress, was recorded. The present accounts are for the year 1939, when there was a loss of £2,663 compared with a profit of £2,018 plus £5,500 taken from reserves for the previous twelve months. The debit forward of £2,295 goes against a credit balance of £368. An extraordinary meeting to consider the resolution for winding up will be held on November 7, and a circular to proprietors states that on the passing of the resolution the liquidator will be possessed of funds sufficient to make immediate payments to the shareholders. The holders of the £23,600 of 8 per cent. preference shares, which are in arrear since July 1, 1932, will receive the par value of their shares together with all arrears of dividend and there will be an interim distribution to the ordinary holders of not less than 11s. a share. This latter payment is a good deal better than the Stock Exchange expected when it was first known that the company was to dispose of its business. Among the chief changes shown in the balance sheet is an increase from £13,395 to £35,994 in stock-in-hand and work-in-progress. Invest-

ments are down to £15,743 from £41,887, but cash has risen to £32,731 from £25,808. Creditors total £6,589 against £1,254, and debtors £7,931 against £10,251. The investments reserve is £15,868 and the item part business sale surplus is the same at £66,108. The company disposed of its locomotive building business early in 1938. It has since been engaged mainly as a hydraulic engineer and iron-founder.

* * *

Economical Rail Welding

Once it has been established that the welding of rails into long lengths is a sound plan for any particular purpose, it is usually a paying proposition to provide the best possible plant for carrying out the work. An example of this is provided by the London Passenger Transport Board, which, having decided that rails welded into lengths of up to 300 ft. were an advantage on tube railways both for quiet running and economical maintenance, provided a thoroughly up-to-date depot in which the welding and all other work connected with the treatment of the rails could be carried out with the maximum of economy. On page 432 of this issue we give an illustrated description of the depot, from which it will be seen that every detail has been carefully planned, and nothing has been stinted towards achieving the desired end. Not only is the welding of running rails and conductor rails up to 150-lb. section undertaken, but Brogden joints at the ends of the former are made, so that the long rails can be directly loaded on to wagons ready for laying in the tracks. Other work carried out at the depot is the classification of rails, both new and secondhand, and the grinding of the surface of rails which may have become corrugated after only comparatively short life in the track, and are still capable of giving further useful service.

* * *

The "Railway" Machine Tool

Many of the various classes and types of machine tools capable of use in engineering shops of different kinds and belonging, as it were, to the category of general utility machines, are just as adaptable to railway requirements as to those of other industries. There are, however, numerous cases in which the design is wholly or in part based on machining operations identified with locomotive and carriage and wagon production and repair; among them are wheel and axle lathes and cylinder boring machines, to mention only two of a series to which this description may correctly be applied. Such machines have been brought to a very high standard of efficiency in respect of accuracy, economy in performance with heavy cuts in conjunction with high-speed steel tools, and sturdiness of construction which enables them to stand up to considerably increased demands for rigidity in the machining of heavy units during the roughing stages and yet show to advantage in the lighter but very important work of applying the finishing cuts prior, in many cases, to the final operation of grinding. Experience in the design and manufacture of "war" machines will, it may be anticipated, lead to still further improvements in the railway machine tools of the future.

* * *

Sounds and Sweet Airs

Sound is a matter upon which public opinion runs high, as witness criticisms of the B.B.C. interval signal and the air-raid siren. The locomotive is lucky to have escaped notice now that any sudden noise is liable to command a momentary nervous attention. Whistling is thoughtfully minimised, but not under a complete veto. The engine whistle has not been transformed into a messenger of calamity like the church bell. Its voice remains unassociated with any of the direful surprises our enterprising foemen hope to spring upon us. Perhaps the whistle has been saved by the varied voices it assumes. Had standardisation imposed upon it a uniform note on all railways and all types of locomotive, no doubt it would have been seized upon to supplement other clarions as a warning of the approach of amphibious tanks, flat-bottom barges, or similar menacing inventions. Fortunately the musical taste of chief mechanical engineers ranges widely, embracing the hoot, the chirp, and the chime, so that engine whistles, like Caliban's sounds and sweet airs, continue harmlessly to "give delight but hurt not."

Central Argentine Moratorium

THE heavy decrease in traffics for the year ended June 30 last, and the poor outlook for the immediate future will have prepared to some extent holders of the debenture stocks and bearer notes of the Central Argentine Railway Limited for the moratorium scheme now put before them by the directors. Postponement of the payment of interest on the 5 per cent. redeemable debenture stock due on November 1 next had been realised as inevitable, but it was not so generally understood that the 4 per cent. debenture stock would be in a similar unfortunate position. Official figures published by the company in the circular issued to holders show, however, that action in this direction was also necessary. The result of the working of the line for the last seven years has been as follows:—

Year ended June 30	Gross receipts £	Working expenses £	Exchange differences £	Net receipts £
1934	9,870,864	7,210,962	1,004,819	1,655,083
1935	9,865,160	7,158,446	1,228,623	1,478,091
1936	9,777,638	7,370,191	1,021,079	1,386,368
1937	12,217,048	8,460,156	1,320,123	2,436,769
1938	9,315,262	7,401,431	915,040	998,791
1939	9,421,113	7,174,398	962,984	1,283,731
1940 estimated	8,404,000	6,857,000	662,000	885,000

Principal reasons for the poor results for 1939-40 were (1) the almost complete failure of the 1939-40 wheat crop in the zone served by the company, (2) the inability of the Government to dispose of the bountiful maize crop, (3) the consequent lack of purchasing power of the farmers, and (4) heavy increased cost of materials, especially coal. Tonnages of wheat and maize carried in the last four years were:—

Year to June 30, 1937	Wheat, tons	Maize, tons
1937	1,730,600	5,546,157
1938	989,770	2,219,164
1939	2,604,968	1,529,041
1940 (estimated)	1,562,000	1,274,000

Of the amount of wheat carried in the year ended June 30, 1940, the greater part was from the carry-over from the 1938-39 harvest. The amount of the 1939-40 harvest estimated to be available for transport was only 383,000 tons as against the 3,588,000 tons of the 1938-39 harvest. At June 30, 1940, accordingly, the estimated tonnage of wheat available for transport was 186,000. The 1940-41 wheat harvest does not become available for transport before December 1 next. Of maize, the estimated amount at the stations and farms available for transport at June 30, 1940, was 4,514,000 tons. Since July 1, 1940, traffic receipts have fallen still further; the decrease up to October 5 is over 8,500,000 pesos or approximately 30 per cent. as compared with the same period last year. While net receipts for the financial year 1939-40 are estimated at £885,000, as above stated, the interest charges total £1,284,735 as indicated below:—

3½ per cent. Central debenture stock	1,730
4½ per cent. Western annuity	90,788
4 per cent. debenture stock	540,380
5 per cent. redeemable convertible debenture stock 1967-87	513,624
5½ per cent. bearer notes	109,213
General interest (net)	29,000

It is also pointed out by the directors that the company owes £1,169,000 to its bankers and £648,100 to the Inland Revenue. Although the company has always received great help from its bankers, conditions have altered so materially owing to the present world situation that the bankers may feel justified in asking for some reduction in their advances, which can only be effected out of earnings as it is not possible to raise fresh capital in existing circumstances. Expenditure on capital account has been restricted to absolutely necessary items and will continue to be so, but some funds will have to be found out of earnings for this purpose. Although the 3½ per cent. Central debenture stock and the 4½ per cent. Western annuity will not be affected, the directors feel obliged, in the circumstances, to ask for a moratorium for the 4 per cent. debenture stock, the 5 per cent. redeemable debenture stock, and the 5½ per cent. bearer notes, for a period of 2½ years; the moratorium period under the scheme is from July 1, 1940, until December 31, 1942, or such other date up to December, 1945, as shall be sanctioned by the Committee which will be set up to represent the stock and noteholders affected by the scheme. This Committee will have power to determine what moneys are available during the moratorium

period for the service of such stocks and notes. This indicates that should conditions improve holders will not necessarily have to forego all interest payments during the 2½ years. It is also proposed that the half-yearly interest on the 5 per cent. debenture stock be payable not on May 1 and November 1, but on January 1 and July 1, the dates on which the 4 per cent. debenture interest is now payable. Separate meetings of the holders affected by the scheme have been convened for October 29.

Express Stops in Outer Suburbs

IN the September 27 issue of THE RAILWAY GAZETTE the suggestion was made that when air raid warnings are operative in the London district, incoming and outgoing express trains should be stopped as a regular practice at certain recognised junctions in the suburban or outer suburban area, so that as many passengers as possible might avoid the delay and added risk involved in proceeding into and out of the London terminus, in the event of their homes being within easy reach (by suburban railway service or road facilities) of the junctions concerned. Arising out of this suggestion we have received some interesting correspondence, which goes to show that the abandonment of almost all express train stops in the outer London area has not been an entirely popular policy, and that a reversion to the earlier practice—even though not now for the purpose of ticket collection—might well be reconsidered. One correspondent points out that on incoming expresses congestion at termini can be lessened if it is possible to leave some proportion of the passengers and their luggage in the suburbs, especially on summer trains of a tourist type, when traffic is heavy. Moreover, there has seldom been lack of public patronage for such facilities when they have been given. Today the number of passengers joining such an express as the L.M.S.R. 8.30 a.m. from Euston to Manchester and Liverpool at Watford is considerable, and there is little doubt that a corresponding stop at Watford of up evening expresses from these cities to London would be equally if not more appreciated. Indeed, even apart from air raids, the wartime need for such stops is greater than that of peacetime, and the lower journey speeds now current make the loss of time from such additional stops negligible, especially as collection of tickets would not be involved.

The ticket stops of earlier days outside London terminals originated when corridor trains were unknown, and arrivals were mostly at platforms without barriers; they enabled the ticket-collecting staff to be concentrated at one point, so that the work was expeditiously carried out. Some of these stops persisted well after the introduction of corridor stock and of travelling collectors, particularly the L.N.W.R. stop at Willesden Junction, which up to the 1914-1919 war was made by the majority of up expresses and by a number of down trains also. On the L.S.W.R., Vauxhall was until a comparatively late date a similar halt by many up fast trains, though not by any in the down direction. Other lines had abolished their ticket stops many years earlier, but partly as a result of running their trains into platforms with barriers at their terminal stations, and collecting on arrival, as, for example, at all the Southern Railway termini in London, at Marylebone, L.N.E.R., and with certain expresses at King's Cross and Liverpool Street. It is, however, the outward extension of dense and ramified electric services and of lateral motorbus communications round London which make desirable some reversion to the earlier practice in regard to suburban and outer suburban stops of long distance trains. That is to say, these radial facilities enable incoming passengers to distribute themselves from important junctions in the London suburban area to extensive adjacent districts, and in view of the gradual reduction of most passengers' luggage to that which can be carried in the hand, most of those concerned would welcome the possibility of getting off short of the terminus in view of the time that they would probably save by so doing. Similar express stops in the outward direction might not prove so attractive, but, with the comprehensive seat registration arrangements now normally in force, the outgoing passenger joining in the suburbs, providing he had booked his seat, would lose nothing of his comfort by not joining his train at the terminus. Already there has been

some recognition of this principle in the provinces, as witness the stops made by the principal L.M.S.R. Euston—Liverpool expresses at Mossley Hill, and by the fastest Manchester trains at Wilmslow. It is the almost invariable custom in the United States.

Selection of the most appropriate places for these outer London halts would depend mainly on the suburban distributive facilities available. On the G.W.R., Ealing Broadway, with its through "underground" connections, would be the obvious selection, and already a number of expresses of semi-fast status do make this call. On the L.M.S.R. Western Division the choice would lie between Watford and Willesden, with the possible alternative of Harrow, which has good radiating bus services. The best distributive centre on the L.N.E.R. Great Northern main line is Finsbury Park, though this is so near to the terminus that its outer suburban advantage would not be so great as in the other cases mentioned; on the Great Eastern Colchester main line Ilford would probably be the best centre for the purpose. The Midland Division of the L.M.S.R. passes through no junctions of corresponding importance outside the Metropolis, but on completion of the Finchley Central—Edgware electrification, when interchange facilities are established between the L.M.S.R. and L.N.E.R. stations at Mill Hill this station could be used to disperse passengers to a wide area of north-west London. On the Western Division of the Southern Railway Wimbledon probably has greater possibilities than Surbiton, as it is the centre of a number of radiating electric lines; on the main Eastern Division lines Orpington and Bromley South would be good exchange points. It is not suggested that all express trains should make such stops, but that a sufficient number should be stopped in each direction to justify the education of the public by propaganda in the use of the new facility, so that it might be proved of the maximum value.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Colour-Light Signals in Air Raids

London

October 18

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Your paragraph on page 365 of the October 4 issue, bearing the above heading, has occasioned considerable interest but also some comment. It is true that the direct colour-light beam is not visible from aircraft at normal flying heights, but what of such signals as platform starters, just short of which locomotives are frequently standing awaiting the guard's signal to restart? Even if the engine crew avoids blowing off from the safety valves, restarting occasions clouds of steam which becomes brilliantly illuminated by the coloured light, and in rainy weather there is also strong reflection from carriage roofs and station buildings. Has this aspect of the matter also been considered by the Ministry of Transport? Another deficiency causing no little anxiety to many when the whole countryside is in pitch darkness due to the blackout, and when, therefore, the slightest light shows up abnormally, is the lack of hooding on banner-type signals. Their large diameter, flood-lit from behind, emits a considerable volume of diffused light which can hardly fail to be spotted by aircraft. In view of the lightning-like effect of silver frost on electric conductor rails, one wonders what precautions the railways propose to take this coming winter, to prevent such conditions making their tracks and trains targets that can be spotted from great distances. Substitution by steam services seems to be the only obvious means of prevention.

Yours faithfully,

A.R.P.

[We understand that such considerations as those raised by our correspondent are under constant review by the Ministry of Transport in conjunction with the Air Ministry, with the object of making any alterations in the existing arrangements that may be necessitated by changing circumstances.—Ed., R.G.]

PUBLICATIONS RECEIVED

A.R.P. Rescue Training. Chester: The City Press, Old Hall Works, Watergate Street. 9½ in. × 7½ in. 20 pp. Price 8d. net post free.—The text of this booklet was prepared in, and for use by, the Surveyor's Department of the Cheshire County Council, and we understand that four editions have already been completely sold to public bodies; the publishers advise us that within a period of a fortnight 42 county, city, and borough councils adopted this work. Enquiries from large industrial firms have led publishers to the belief that the booklet may be of use to those who have A.R.P. rescue squads apart from or in addition to those provided by the local authority, and accordingly a new edition has been produced. Single specimen copies may be obtained price 8d. each post free, and quantities are available at 7s. 6d. a dozen and 40s. a 100 carriage paid. The book begins with an admirable exposition of the duties of rescue parties and the effects to be dealt with. The main text consists of practical illustrated notes on the use of the equipment of a rescue party, covering such subjects as ropes, knots, and lashings; block and tackle and levers; shears, gyns, dericks, jacks, winches, etc.; shores and

strutting; and the use of the ladder for rescuing casualties from roofs or windows. The sketches are admirable and the accompanying text concise and clear. Other contents include a schedule of the equipment for one rescue party, and some notes on the observed effect of an H.E. bomb. We have no hesitation in recommending this brochure to those who require up-to-date and helpful information on the subject of training rescue squads.

Boletim da Associação de Engenharia Ferroviária ("ABEF"): Bulletin of the Railway Engineering Association of Brazil. Vol. 1, Nos. 1 and 2, for January to April, 1940.—The Brazilian Railway Engineering Association was founded in October, 1935, with offices at Campinas (São Paulo), where a congress on railway engineering and legislation was held in that year. The Chairman is Senhor C. W. Stevenson, who presides over an advisory council of nine, with the usual officers. The delay in making known the results of the Campinas meeting led to the proposal to establish an official journal and the first issue—publication will for the present be bi-monthly—appeared in January last. The journal is well-

produced and contains the proceedings of the 2nd Congress held at Curitiba in October, 1938, with articles on a number of interesting subjects. The 3rd Congress is to be held at Bello Horizonte in October this year. We wish continued success to the Association and to its journal. It contains a bibliography, in which we note that the principal articles in our own pages receive notice.

General Map of Asia. Edinburgh: John Bartholomew & Son Ltd. The Geographical Institute, Duncan Street. 31 in. × 25 in. (8½ in. × 5 in. folded). Price 3s. on cloth, 1s. 6d. on paper.—The war interests in various parts of Asia make particularly appropriate the production at the present time of this useful general map of that continent. It is tinted to show political boundaries and in this connection we notice that it indicates Manchukuo as a separate country, but ignores the military occupation by Japan of other parts of China. The European frontier of the U.S.S.R. is shown substantially as it was at the outbreak of the present war and there is a separate indication of the incorporation of the Baltic States, the Finnish conquests, and the division of Poland with Germany. The production accords with the customary high standard of this well-known map house.

THE SCRAP HEAP

Out of every dollar of net earnings, the U.S.A. railways in 1939 paid 37.7 cents in taxes, compared with 24.1 cents in 1929.

* * *

Sixty thousand employees of the Canadian Pacific Railway, who have been collecting old gold trinkets, have raised £22,000 to buy a bomber for the Canadian Air Force.

* * *

Mr Samuel Castor, a retired G.W.R. timekeeper, of 53, Capel Crescent, Newport, has given £250 out of his life savings to the Royal Gwent Hospital in memory of his wife, who died last February.

* * *

There is the occasional grouser still. On the platform, one was telling his troubles to people who had plenty of their own. He carried on with increasing bitterness until a workman took his pipe out of his mouth and asked, "'Ow would yer like to live at 'Amm, guv'nor?'—From 'The Star'."

* * *

PACKAGE TRANSPORT

The portelectric system . . . is intended for the transportation, not of passengers, but of mail and express matter only, at rates of speed approxi-

mating two miles per minute, the steel car being drawn along its confined path at this high rate by the pull of numerous solenoids through which the track is laid, each coil exerting its power for a short time only as the car approaches it. . . . The passage of the car completes the circuit between the upper and lower rails through the solenoid in advance of the car, and the car is thus pulled into the coil until it is midway through the coil, when the current is cut out and transferred to the next coil in advance.—From the "Scientific American" of October, 1890.

* * *

"The Great Western Railway" which was not restricted to any particular gauge by its charter, had decided on 4 ft. 8½ in., but polite threats from the Government compelled the adoption of the broad gauge. This change practically destroyed the usefulness of the Great Western Railway and several years later a third rail was put down. . . ."

The above extract from a recent *Bulletin of the Railway & Locomotive Historical Society* reads as if it were a somewhat curious explanation of Brunel's 7-foot gauge, until it is added that the references are to the Great Western Railway of Canada, a system

which had its origin under Canadian legislation of 1834 and 1845, brought its first section into use in 1853, and finally operated some 800 miles of railway on being amalgamated with the Grand Trunk Railway in 1882. A further sidelight on the adoption of the broad gauge (5 ft. 6 in.) in Canada is the suggestion in the *Bulletin* that the British Military authorities of a century ago were of the opinion that if the Canadian gauge was broader than the 4 ft. 8½ in. of railways in the Eastern United States, it would hinder "any attempt at an invasion of Canada by the United States"! The G.W.R. of Canada was converted to mixed and finally to standard gauge between the years 1866-1873.

* * *

In 1828 the school board of Lancaster, Ohio, refused to permit the use of the schoolhouse for the discussion of the question as to whether or not the railways were practical. The action of the Lancaster board is emphasised in their reply to the request: "You are welcome to use the schoolhouse to debate all proper questions in, but such things as railroads, telegraphs, and impossibilities are rank infidelity. There is nothing in the word of God about them. If God had designed that his intelligent creatures should travel at the frightful speed of 15 miles an hour by steam, he would have clearly foretold through his holy prophets. It is a device of Satan to lead immortal souls down to hell!"

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

ARGENTINA

Prohibition of Wheat Exports

A Government Decree issued on July 30 prohibits the exportation of wheat, in order to safeguard the existing stocks for domestic needs in the country, estimated at some 850,000 tons. The Ministry of Agriculture may, however, grant special permits in the case of exports of wheat or flour to neighbouring countries, or in the case of contracts made before the issue of the Decree, provided they do not interfere with internal consumption requirements. The Decree has been criticised as premature, in view of the National Grain Board's estimate that millers' stocks are over 573,000 tons, which indicates no immediate shortage of flour. The prohibition of wheat exports may be dictated by a possible failure of the 1940-41 crop, the prospects of which are not good.

Railway Nationalisation Proposals

Although nationalisation of the privately-owned Argentine railways is rather a matter of academic interest, proposals periodically emanate from Argentine sources. The latest scheme is embodied in a project submitted to Congress by a Deputy along the following lines: Article 1 stipulates that, unless Government permission is previously obtained, the transfer of shares and debentures of Argentine railways, whether contracted in or out of the country, shall not be recognised. Article 2 authorises the Government to take possession, when it considers it convenient, of all the privately-owned railways and operate them for the account of the State. Article 3 provides that expropriation shall be made at the value of the capital account of each company, as fixed by mutual agreement between the Government and the respective local boards. Subsidiary companies and investments made by the companies in property or shares in other concerns abroad shall not be included in the capital accounts. Finally, under article 4, the Government is empowered to authorise the issue of 30-year bonds at 3½ per cent. interest and 1 per cent. amortisation per annum, or the utilisation of raw materials on a barter system for the purpose of acquiring the lines.

Engineering Meetings

A meeting of the River Plate branch of the Institution of Mechanical Engineers was held in Buenos Aires on August 5, when Mr. R. J. Cochrane read a paper entitled "Some Remarks on Economical Engineering Production." High prices and economies enforced by war conditions would, said the lecturer, bring about some surprising changes in manufacturing practice,

especially as regarded the utilisation of waste materials. Investigation showed that more than 50 per cent. of purchased raw materials found its way on to the scrap heap as waste, and a close supervision of current practice in manufacturing would produce great economies. A little ingenuity and careful study of conditions could lead to reduced costs in manufacture.

A discussion on rail welding was opened by Mr. H. A. McGillycuddy, Chief Engineer, Central Uruguay Railway, on August 8 at a meeting of the Buenos Aires Association of the Institution of Civil Engineers. He was followed by Mr. L. A. Woodbridge, Chief Engineer, Central Argentine Railway, who stated that the principle of resistance or butt welding had been known for at least 45 years; but until 20 years ago its application had been confined to the light steel industry, where very small sections were handled. The invention of flash butt welding dated from about 1919, and its introduction into industry opened the way to sound and economical junction of large sections. Simultaneously, forge-welding was forced into the background. The first rail welding experiments were made in Germany in 1924, the Thermit system being used, and in 1927 some 40,000 joints of this kind were made. In 1928, the claims of flash butt welding were advanced as combining simplicity, speed, economy and reliability. A paper on rail welding prepared by Mr. F. L. Creswell, Chief Engineer, B.A.G.S.R., was read, and others present who contributed their views on the subject were Messrs. J. H. Taylor, K. N. Eckhard, H. W. Stevens and R. W. Peake.

BRAZIL

Viação Ferrea do Rio Grande do Sul

A service of railcars has been inaugurated on this railway between Rio Grande and Jaguarão. The timetable gives connection with the railcars of the Ferrocarril Central del Uruguay, and it is now possible to make the journey from Rio Grande to Montevideo in 11 hr.

Mr. William Jones Mamond has arrived in Porto Alegre with powers to sign a contract on behalf of American interests for the supply of steel rails, valued at 30,000 contos, to this railway. It is believed that the Inland Steel Company of Chicago is the manufacturer concerned and that the business will be financed, in part, by the United States Import and Export Bank.

Mogyana Railway

The report for the year ended December 31, 1939, of this railway, which, as

mentioned last week, has been expropriated by the Federal Government, revealed that receipts for the year amounted to 62,356 contos, and that expenditure totalled 47,305 contos, leaving a balance of 15,050 contos. Various factors made it impossible to maintain such satisfactory results as obtained in 1938, especially the uncertain state of world affairs in the first months of the year and the outbreak of war in Europe later.

The falling off in transport was most pronounced in coffee, as this was bound to suffer as a consequence of the war. Tonnage, which in 1938 totalled 210,159, fell to 159,931 in 1939, but 1,718,852 60-kg. bags were in warehouses awaiting a favourable opportunity for dispatch. Notwithstanding, shipments represented 15.43 per cent. of total entries at the port of Santos.

Passengers totalled 2,825,554 against 2,816,893 in 1938 and in addition 2,947 immigrants were carried to the interior, free. Luggage and parcels increased by 1,162 tons from 44,190 tons to 45,352, and animals by 27,763 head from 97,238 to 125,001. Other goods totalled 973,950 tons against 1,022,872 in 1938.

Three Consolidation type locomotives were built in the railway workshops during the year and handed over to traffic in June. A further five Mikado engines were received from Henschel & Sohn. The railcar constructed in the railway shops in 1938 maintained an average daily run of 258 km. and gave entire satisfaction. Other improvements included the continuation of stone ballasting, construction of various warehouses, and the completion of 97 dwelling houses for employees, in all of which the sum of 2,584 contos was expended. Contributions to the Staff Pension Fund amounted to 4,060 contos.

Sorocabana Railway

The objection raised by the Metropolitan-Vickers Electric Co. Ltd. to the granting of the contract for the electrification of a section of this railway to the Electrical Export Corporation has been overruled.

Victoria to Minas Railway

A concern known as the Companhia Brasileira de Mineração e Siderurgia has been authorised to take over this railway together with all rights and obligations provided for in the contract approved by Decree No. 12,094 of June 7, 1916. The new concessionary will bring the line from Barbados to Desembargador Drummond up to such a standard that it will carry annually a minimum of 3,090,000 tons of iron ore as well as ordinary merchandise economically. It will also extend the line from Desembargador Drummond for a distance of approximately 40 km. to the Minas plateau, and construct a new line from Barbados to the port of Santa Cruz in the State of Espírito Santo. The concession will operate for a period of 90 years from the date of the Decree, but after this period all

lines, installations and rolling stock will revert to the Federal Government free of indemnity.

UNITED STATES

New Refrigerator Cars for Oranges

A new type of refrigerator car has been designed and built by the Pacific Fruit Express Company at its Los Angeles shops. As well as an ice bunker running the whole length of the roof, refrigerating compartments are fitted along both sides of the car. This arrangement allows of three tiers of boxes of fruit being stacked in each car, the capacity of which is thus doubled. In order to keep a check on the temperature of the fruit in transit, 12 thermometers, packed in with the fruit, are connected with indicators on the roof of the car. The new type of car is only 6 ft. longer than the earlier standard type, despite its capacity being double. If after exhaustive test the new car proves completely successful, it should enable a reduction in fruit rates, from the entire west-coast marketing region.

CANADA

Free C.P.R. Scholarships at Universities

Awards of two free-scholarships in McGill University under the terms of the Canadian Pacific Railway's annual offer to young men and young women employees of the permanent staff under the age of 21 and to minor sons and daughters of employees is announced by F. J. Curtiss, Superintendent of Pensions and Staff Registrar of the company in Montreal. The recipients are Elizabeth Hillman, of Montreal, daughter of Lt.-Col. D. Hillman, District Engineer, and John F. Whittaker, son of F. J. Whittaker, who is employed in the C.P.R. Department of Natural Resources at Calgary.

The current awards bring up to the hundred mark the number of scholarships given by the C.P.R. in McGill University, the Ecole Polytechnique and the Ecole des Hautes Etudes Commerciales. Sixty-four have been given in McGill since the scholarships were inaugurated in 1917 and about 36 to the other two educational institutions.

INDIA

Dacca Mail Derailment

At about 3 a.m. on August 5, the down Dacca mail was derailed near Jayrampur station on the Eastern Bengal Railway main line, about 80 miles from Calcutta. Casualties are now stated to be 36 dead and 90 injured; the driver fortunately escaped injury. Relief trains arrived within about 2 hr., and the General Manager and other officials were quickly on the scene. Many of the injured were brought to Calcutta by the Darjeeling mail and sent to hospital, and a casualty station was improvised at Sealdah station. From an official statement it

is believed that the disaster was due to the displacement of a length of rail. A full inquiry into the accident is proceeding.

It is noteworthy that the down North Bengal express had passed the spot about 25 min. earlier, yet the engine of the Dacca mail running at about 45 m.p.h., jumped the track, and, dragging the coach immediately behind it for about 150 ft., rolled down the 15-ft. embankment and came to rest on its side. The second and third coaches also fell down the embankment, telescoped and completely smashed; all these three vehicles were third or inter class. The next two carriages, upper class bogies, were derailed and damaged. The sixth, a composite third class and railway mail service bogie, was also derailed. Fortunately, the lighting system in the standing carriages was unaffected, and the lights greatly assisted the rescue party.

A communique issued, shows that the train arrived at and left Chuadanga station—only 4½ miles from the point of derailment—on time, and as it weighed about 350 to 400 tons behind the tender and was hauled by an Atlantic type locomotive, and as the booking is easy, speed is unlikely to have been much in excess of 45 m.p.h.; the gradients throughout are negligible. The double-line track where the derailment occurred consists of new 90-lb. f.b. R.B.S. rails relaid on new sleepers in 1939. [An illustration of the derailment will be found on page 435.—Ed., R.G.]

CHINA

The Peking-Jehol Railway

This line, constructed by the Japanese army in the early days of the present China-Japan War—as reported in THE RAILWAY GAZETTE issues of November 12, 1937, and April 8 and 22, 1938—is now in regular operation. The railway authorities are, however, extremely reluctant to supply particulars of the line, as it is still considered to be of primary military importance, although it has never played a spectacular part in the operations in China, being situated so far from the scene of any serious fighting. The real reason for this reluctance may be found in the fact that the line was constructed very hurriedly without much previous survey, and consequently only rough plans and specifications were used, and no completion drawings have as yet been made. Travellers over the line have, however, supplied some particulars, which are summarised hereunder.

The total length of the railway, from Chien-Men station Peking to Jehol (Chengte) is 227 km. (142 miles), and it is single track throughout. There are 21 intermediate stations and halts, each with a crossing loop, but only temporary station buildings have been built, consisting of wooden huts for staff, passengers and goods. Temporary water supplies are provided at some of the stations, in the form of a tank on a stack of sleepers and a pump in a

wooden or mud shed. At regular intervals along the line there is some primitive accommodation for the permanent way gangs. The frontier station, Kupeikou, 80 miles from Peking, has four loop sidings, and special huts for the Customs service. It is situated near the summit of the line in the Kupeikou pass through the frontier mountain range, at the point where the railway passes beneath the Great Wall of China.

Reversing Stations and 1 in 25 Grades

In the first 50 miles from Peking, the line crosses the plains south of the mountains, and has numerous small bridges and flood openings, of a temporary nature. The mountain section has 12 tunnels, 5 reversing stations, and the longest section between them is about 1½ miles; the summit level is 2,200 ft. above the Peking terminus level. The curvature is of widely varying radii, but many curves are as sharp as 10-ch. radius. There is no ruling gradient, nor compensation for curvature; the steepest gradient is about 1 in 25. The permanent way consists of second hand 60-lb. rails on wooden sleepers, the rails having been supplied from the stocks available from the former Chinese Eastern Railway, sections of which have been relaid with heavier rails since the conversion from the Russian 5 ft. to the standard gauge.

There is one regular daily mixed train each way, covering the distance between Peking and Jehol in 12 hr.; goods and military trains are run as required. The Chinese section, Peking—Kupeikou, is operated by the North China Railway, and the Manchukuo section, Kupeikou—Jehol, by the Manchukuo State Railways, both under the direction of the South Manchuria Railway administration.

WESTERN AUSTRALIA

Basic Wage Increases

The annual declaration of the basic wage in Western Australia was made by the Arbitration Court on June 7, 1940, and operated from that date, as a result of which the basic rate increased from £4 2s. 2d. to £4 2s. 8d. a week in the Metropolitan Area, i.e., within a radius of 15 miles of the General Post Office, Perth, and from £4 3s. 1d. to £4 3s. 3d. in the South-West Land Division. On the Goldfields the rate dropped from £4 16s. 4d. to £4 16s. 3d.

In July the court declared a further amendment to operate from July 31, 1940, and on account of increased living costs the rates were again increased, from £4 2s. 8d. to £4 5s. 4d. a week in the Metropolitan Area, £4 3s. 3d. to £4 5s. 6d. a week in the South-West Land Division, and from £4 16s. 3d. to £4 18s. 8d. a week in the Goldfields and elsewhere. The cumulative effect of these increases is to add approximately £60,000 per annum to the railways wages bill.

AN UP-TO-DATE RAIL WELDING SHOP

The most complete fixed rail welding plant in Great Britain is that of the London Passenger Transport Board

AT the permanent way depôt of the London Passenger Transport Board (described in *The Railway Engineer* of November, 1933) part of a former car shed, 700 ft. by 80 ft., has been adapted for the welding of rails up to 300 ft. in length and also for the heat-treatment of the welded joints. In addition the shop contains plant for the machining of Brogden chamfered rail joints, and for the grinding of rails that have become corrugated under traffic.

There is an A.E.G. all-electric flash-butt welder with a capacity of 160-320 kVA, the 400-volt alternating current for which is supplied from a 600-volt d.c. motor generator with a capacity of 300 h.p. The maximum welding area of the machine is 10,000 sq. mm., which thus enables it to weld the joints of bull-head and flat-bottom rails up to 150 lb. per yd. It is entirely automatic in action once the starting button has been pressed; on completion of the weld the machine cuts out automatically.

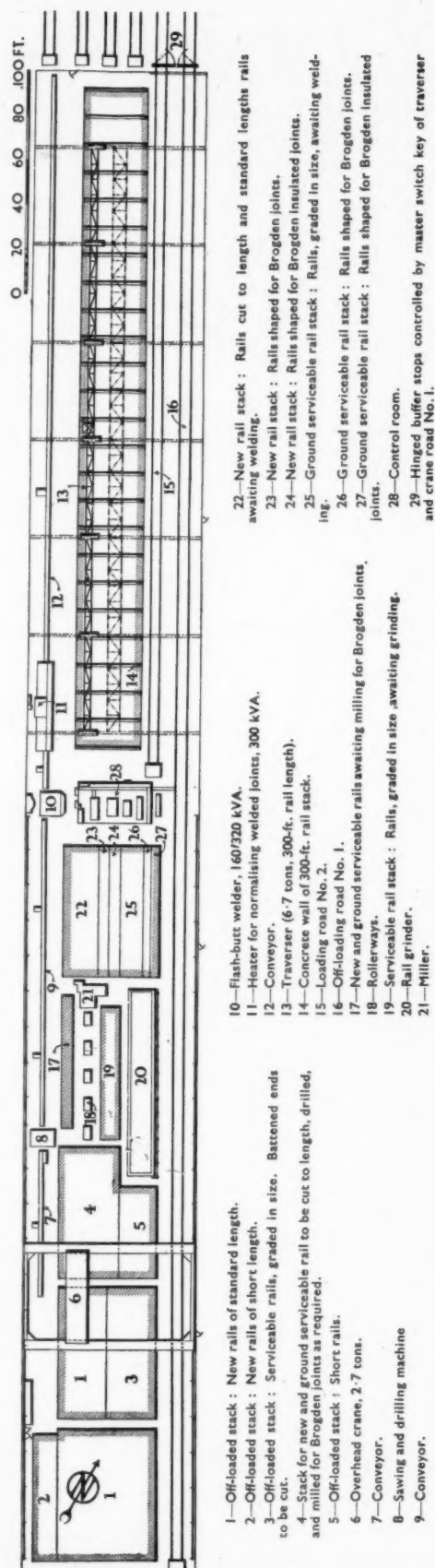
A standard 60-ft. length of rail is transferred from the rail stack to a roller conveyor by means of a crane lifting at two points. It is then passed along the conveyor, the controls of which are on the welding machine. A second rail is then placed on the conveyor, and the two rail ends are aligned and clamped in the heavy copper contacts of the welding machine, where they are butt welded in a matter of about three minutes. The 120-ft. length is then moved forward 60 ft. on the conveyor so that a third rail can be added, and so on up to 300 ft. The extruded upset metal at the weld is meantime removed by means of pneumatic chipping tools, and the rail is passed forward on the conveyor to the normalising machine, where the joint is clamped in the copper contacts, the button pressed, and a current at low voltage passed, heating the weld (which by this time has been reduced to black heat) to 800-850° C. in approximately four minutes. The required temperature is denoted by the use of a temperature-finding powder applied to the head of the rail and melts at the desired temperature.

The normalising machine is of the electro-pneumatic type, and has a capacity of 300 kVA. The 400-volt alternating current is supplied, as in the case of the welder, from the 600-volt d.c. motor generator. An interlocking device ensures that the welder and the normalising machine are not operated simultaneously.

After welding and normalising the joints, the 300-ft. rail length is lifted at 7 points from the conveyor by an electric traverser, and placed on the rail stack, where the welded joints are finally ground, to give a true profile to the head of the rail, by means of Hi-cycle or pneumatic grinding tools. The total time to weld, normalise and grind the five joints of a 300-ft. rail is about one hour.

The welded rail lengths are subsequently transferred from the rail stack by means of the traverser to a special train consisting of five bogie rail wagons each fitted with four special steel bolsters. The maximum load is eight 300-ft. rails, and these are pinned at two points on each rail wagon and allowed to slide on the intermediate bolsters. The loaded train will negotiate reverse curves of 5-ch. radius without difficulty.

At the ends of the long welded lengths of running rails Brogden chamfered joints are used. For the purpose of forming the special chamfers at the rail ends a Kendall & Gent milling machine has been designed and installed in the shop, and will cut a rail end in 14 minutes. In addition, a combined saw and drilling machine has been installed which will cut the rail and drill up to six fishbolt holes simultaneously. Although standard four-hole fishplates are used for Brogden joints, three holes are, of course, required in

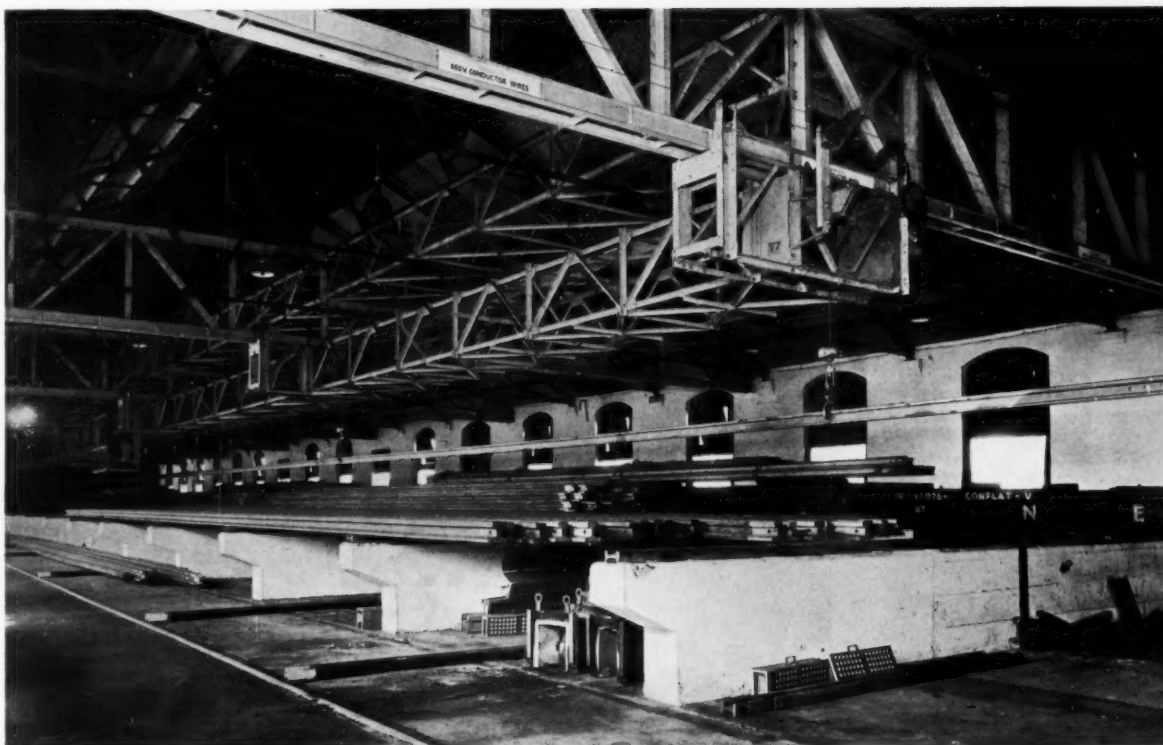


- 1—Off-loaded stack : New rails of standard length.
- 2—Off-loaded stack : New rails of short length.
- 3—Off-loaded stack : Serviceable rails, graded in size, to be cut.
- 4—Stack for new and ground serviceable rail to be cut to length, drilled, and milled for Brogden joints as required.
- 5—Off-loaded stack : Short rails.
- 6—Overhead crane, 2.7 tons.
- 7—Conveyor.
- 8—Sawing and drilling machine.
- 9—Conveyor.
- 10—Flash-butt welder, 160/320 kVA.
- 11—Heater for normalising welded joints, 300 kVA.
- 12—Conveyor.
- 13—Traverser (6.7 tons, 300-ft. rail length).
- 14—Concrete wall of 300-ft. rail stack.
- 15—Loading road No. 2.
- 16—Off-loading road No. 1.
- 17—New and ground serviceable rails awaiting milling for Brogden joints.
- 18—Rollerways.
- 19—Serviceable rail stack : Rails, graded in size awaiting grinding.
- 20—Rail grinder.
- 21—Miller.
- 22—New rail stack : Rails cut to length and standard lengths rails awaiting welding.
- 23—New rail stack : Rails shaped for Brogden joints.
- 24—New rail stack : Rails shaped for Brogden insulated joints.
- 25—Ground serviceable rail stack : Rails, graded in size, awaiting welding.
- 26—Ground serviceable rail stack : Rails, graded in size, awaiting welding.
- 27—Ground serviceable rail stack : Rails shaped for Brogden joints.
- 28—Control room.
- 29—Hinged buffer stops controlled by master switch key of traverser and crane road No. 1.

Plan of rail welding shop, London Passenger Transport Board

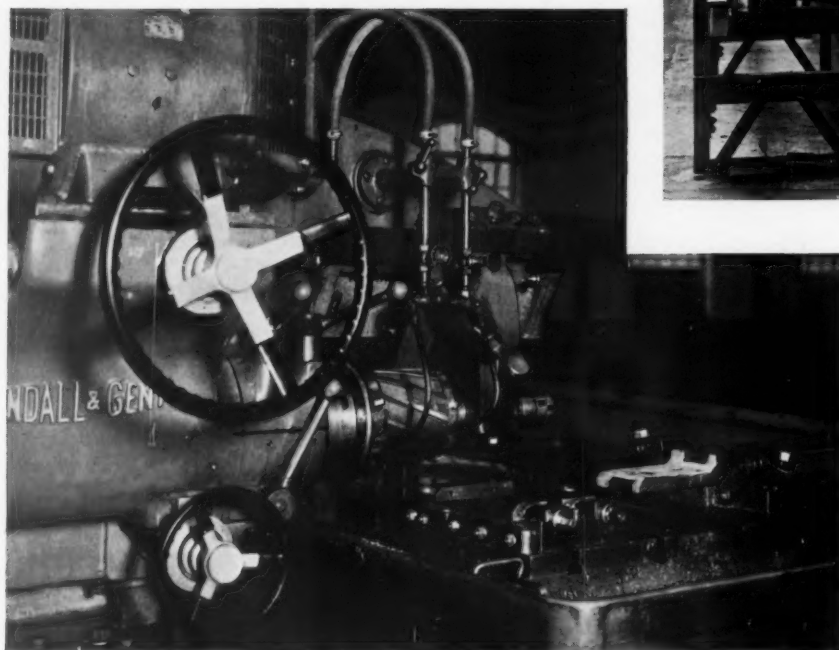


General view of rail welding shop, showing the flash-butt welder in the middle distance, on the left; the Brogden milling machine in the centre; and the rail grinding machine on the right

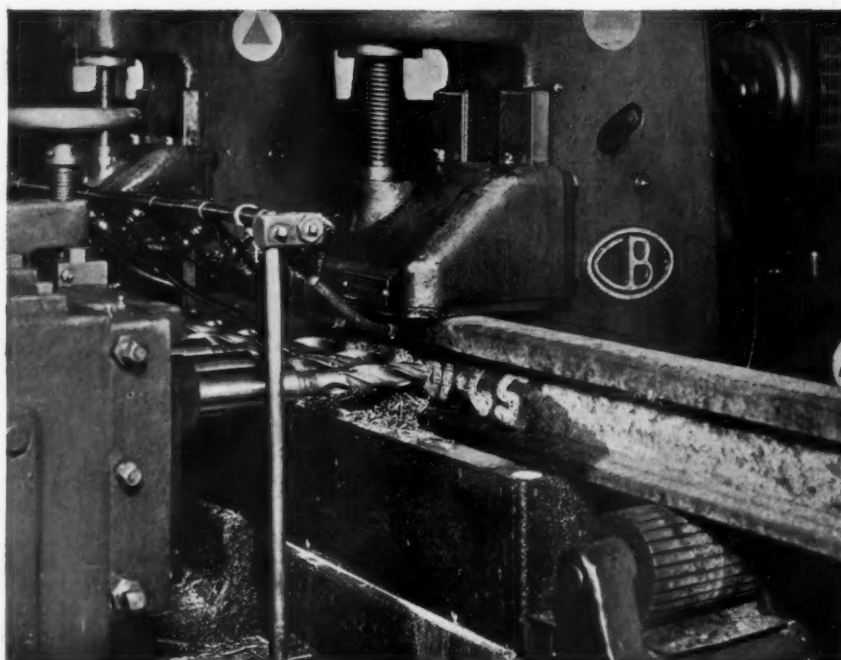


Traverser and rail stack, showing rail lengths 300-ft. long being lifted at seven points and placed on rail stack

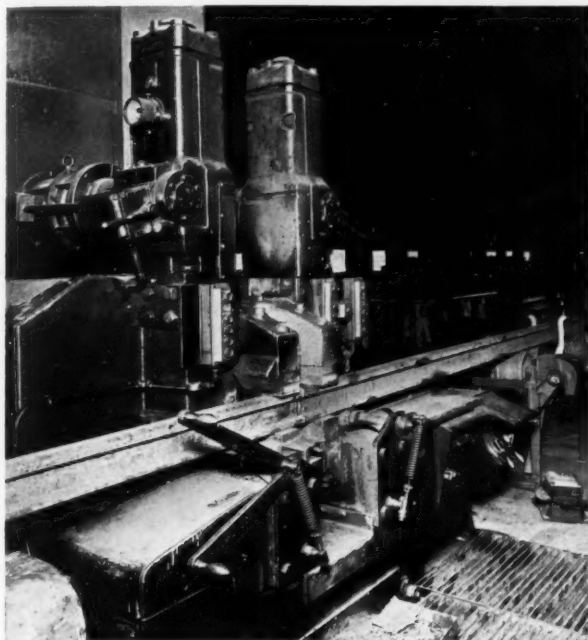
Right: Normalising plant and flash-butt welder in the rail welding depot of the London Passenger Transport Board, showing 150-lb. conductor rail on electric roller conveyor



Left: Kendall & Gent milling machine specially designed for forming the chamfers of Brogden joints. This machine is capable of cutting a rail end in 14 minutes



Right: Combined saw and drill shown drilling three fishbolt holes simultaneously in a rail end for the Brogden chamfered rail joint



Electric flash-butt welding machine with rail ends in position ready for welding. Note the series of press buttons on each side-of the welder which control the movement of the conveyor

each of the two rail ends. Current rails of 150-lb. flat-bottom section are welded into 300-ft. lengths and are joined with standard fishplate joints, but the welded joints are not normalised.

Grinding Out Rail Corrugations

One of the problems which have become acute under intensive electric traction, such as that found on the lines of the London Passenger Transport Board, is the development of corrugations in the head of the rails, so that they become unserviceable long before loss of weight would justify their removal from the track. A solution has been found in a surface grinding machine installed in the welding shop, which will take four 60-ft. rails and grind the heads to a true surface, so that the rails may be reinstated in the track. The actual grinder is suspended from the travelling carriage of the machine, and the grinding pressure is supplied by weights.

In addition to the plant in the shop described above, the board has a mobile welding plant,* comprising a 400-h.p. diesel generator assembled on a specially-constructed wagon, and a 300-kVA electro-pneumatic welding machine mounted on a similar wagon. The complete unit is designed to negotiate the tube loading gauge, and weighs approximately 100 tons. The diesel generator and welding machine were supplied by the A.I. Electric Welding Machines Limited, which company manufactured the welding machine and acquired the diesel generator from the English Electric Co. Ltd.

The process of welding rails into 300-ft. lengths with this plant at the various outlying depots where it may be required is very similar to the method adopted in the welding shop, the main exception being in the method of handling the rails, owing to the lack of the facilities found in the welding shop. From the mobile welding plant the long rails are drawn by means of a compressed air winch on to the five rail wagons.

* Described in THE RAILWAY GAZETTE of February 11, 1938, page 271

Derailment of the Dacca Mail, Eastern Bengal Railway



In the early morning of August 5, the down Dacca mail was derailed near Jayrampur on the double-line section of the Eastern Bengal main line. Up to the time of going to press, the cause of this derailment is unknown here, but the standard and condition of the permanent way would appear to be good, and there seems to be no suspicion of excessive speed. The Atlantic type locomotive involved is almost certainly one of those introduced on the E.B.R. about 1910 and used for mail, express, and passenger working over that line ever since. It was this class of engine that used to work the Darjeeling mail when it had 60 m.p.h. bookings between Dum Dum junction and Ranaghat about 1911

HIGH SPEED JUNCTIONS IN THE U.S.A.

A résumé of work which has been done by the Chicago & North Western Railway in improving its junctions on high-speed routes, including the use of curved switches 30 ft. and 39 ft. long, divided turnouts, and other developments of standard practice

THE rapid increase in speed that has taken place over many American main lines during recent years has directed close attention to the design of junction layouts, for it is realised that turnouts which involve severe reductions of speed have the effect of making such a junction a bottleneck in any high-speed route. An article in the August issue of our American contemporary *Railway Engineering and Maintenance* by Mr. B. R. Kulp, Chief Engineer of the Chicago & North Western Railway, describes the steps that have been taken by his company to improve junction layouts, and he writes with authority, for over the principal main line of his system, between Chicago and Omaha, there operate the high-speed diesel City of Los Angeles, City of San Francisco, City of Portland, and City of Denver services, as well as The 400, pioneer high-speed train of the Chicago-Twin Cities competition.

Several years ago the Track Committee of the American Railway Engineering Association inaugurated a study of the subject, with the result that curved switches up to 39 ft. in length have been designed and have become the recommended practice of the A.R.E.A. for fast running routes. The Chicago & North Western, however, has pursued its own researches, and has tried three alternative methods for high-speed turnouts. The first is to use a standard No. 20 turnout with straight switch-blades and all the curvature on the turnout track, which, in effect, embodies no change in previous practice, and is the least desirable arrangement. The second is to lay in a No. 20 turnout with a curved switch 30 ft. in length, which greatly reduces the angle at the point of the switch and correspondingly improves its riding qualities. The third method is to use a No. 20 turnout, with straight switch-tongues 30 ft. long, but to split the turnout alignment between the two roads in such a way that half the angle of divergence is taken up by each track, giving the effect of a 1 in 40 turnout on each road, instead of a 1 in 20 turnout on the diverging track only.

It is not always possible to follow the third of these plans owing to lack of space or the expense involved in track rearrangement; but from the riding point of view the divided turnout gives the best results, and the increased life of the turnout material is held by the C. & N.W. more than to justify any expenditure in track realignment that may be necessary. But where the divided turnout arrangement is not possible, the C. & N.W. practice is to curve the diverging track continuously from the point of the switch-tongues to the nose of the crossing, the aim being to minimise the effect of deflecting wheels and equipment abruptly from a straight line, and to reduce the turnout curvature sufficiently to prevent the lack of superelevation from adversely affecting the riding qualities through the junction. In this connection, the A.R.E.A. standard 39-ft. curved switch, used in conjunction with a No. 20 turnout, has an angle of 25 min. at the point, a curvature of 1 deg. 45 min. through the switch proper (that is, a radius of 49½ ch.), and of 1 deg. 40 min. (52 ch. radius) between the heel of the switch and the nose



A Chicago & North Western express running through a turnout at Evanston, Illinois, at 75 m.p.h.

of the crossing, measured along the centre-line of the track. During the last six years the C. & N.W. has been installing 1 in 20 turnouts with 30-ft. curved switches in high-speed routes; these have an angle of 40 min. at the point of the switch, a curvature of 1 deg. 30 min. (58 ch. radius) through the switch, and of 1 deg. 32 min. (56½ ch. radius) between the heel of the switch and the nose of the crossing. The point of the switch-tongue is ½-in. thick and for the full length of the side planing the angle is 78 deg. to the vertical, no chamfering being necessary. The curved switch-tongue is of the Samson type, and bears against an undercut stock rail; on the opposite side the straight switch-tongue bears against a stock rail joggled in such a way as to maintain correct gauge throughout the switch. Stress is laid by Mr. Kulp on the importance of having the bending of the stock rails done at the switch and crossing manufacturers' plant, as accuracy of an order which cannot be ensured by bending on the site is essential. The C. & N.W.R. has not yet used the A.R.E.A. 39-ft. switch, because it requires stock rails longer than the general 39-ft. length of rail standard in the U.S.A., and also, owing to its great length, an auxiliary throwing device near the centre of the switch (which has not been found necessary with 30-ft. switches), but concedes that the reduction from 40 min. to 25 min. in the angle of turnout, by the use of 39-ft. switches, is desirable if it can be secured without undue expense. For an angle of 25 min. at the point of the switch, and a curvature of 1 deg. 40 min. (52 ch. radius), turnout speeds of 40 m.p.h. facing and 50 m.p.h. trailing give comfortable riding, this being equivalent to a deficiency of roughly 3 in. in the superelevation of the curve of the turnout; the higher permissible trailing speed is due to the fact that the impact at the point of the switch is considerably less in trailing than in facing movements.

Various types of crossing are used in the layout of high-speed junctions, but on the C. & N.W.R. there is a preference for the rail-bound manganese type—that is, a centre portion, including the nose, which consists of a manganese alloy casting, bound on the outside by ordinary rail wings—and crossings of this type are generally used for high-speed turnouts. Great care is taken in the selection of materials for

these junctions, including timbers, and also in securing and maintaining accurate alignment in the track as it approaches the switch. The slightest error in alignment may considerably increase the wear of the switch-blades at the point. Mr. Kulp also stresses the importance of seeing that the speed restrictions through high-speed junctions are properly observed; they should where possible be indicated by visual warnings, or, failing that, by timetable restrictions, and he seeks the co-operation of the operating authorities in ensuring that these restrictions are not violated. As to the future, he foresees further radical changes in the reduction of angles of turnout and of turnout curvatures, in order that the least possible restraint may be placed on running speeds through junctions—a matter of major importance in these days when

continuous running speeds of 80 to 100 m.p.h. are becoming common. The photograph reproduced opposite shows The 400 of the Chicago & North Western (with its name-plaque in the centre of the smokebox door of the locomotive), on the Chicago, Milwaukee, St. Paul and Minneapolis service, taking a high-speed junction at Evanston, Illinois, at approximately 75 m.p.h. As will be seen in the photograph, the junction is the convergence of four tracks to two, with the curvature of the turnout halved between the pair of tracks—the third of the methods described in the foregoing notes, and the one most favoured by the C. & N.W. management. The train is passing through the junction in the trailing direction. This express has since become a streamline train with diesel haulage.

WELDING IN LOCOMOTIVE CONSTRUCTION

A new automatic flash-butt welding machine at Doncaster Works, L.N.E.R.

A RECENT addition to the plant of the Doncaster locomotive works of the L.N.E.R. is the A1 electric welding machine illustrated herewith.* This machine carries out the detail welding that had previously to be done by hand and by butt welding eliminates much of the tedious drawing down by steam hammer of blooms for varying sized locomotive and carriage details. The machine has a welding capacity of $12\frac{1}{2}$ sq. in. cross section area. It comprises two end frames, on the left hand of which is mounted the fixed head, while between the two frames is located the moving head which slides on round support shafts. The clamps are operated by pneumatic clamping cylinders through heavy steel levers. The butting cylinder is mounted in the right hand frame and operates the moving head by means of a lever and push rod. Incorporated in the butting cylinder is the A1 patent automatic dashpot control gear which gives a wholly automatic action to the welding operation.

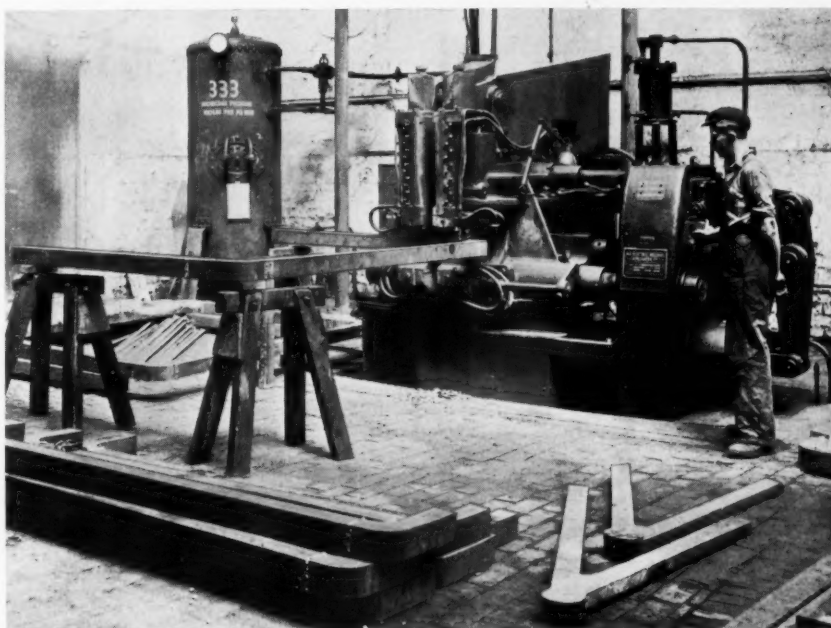
The two pieces to be welded are placed in the jaws of the machine and clamped under pressure. A depression of the push button commences the welding operation and pre-heating is effected by an automatic reciprocating motion, the time factor of which is solely dependent on the physical conditions of the work. When the correct pre-heating temperature has been reached the machine automatically changes over to the final flash welding at the end of which the heavy forging pressure is applied and the weld is completed.

The machine is operated from an a.c. electric supply and on 80 lb. per sq. in. air supply. It is fitted with a 200-kVA. transformer and is capable of straightforward flash welding solid sections up to 6 sq. in., and when the pre-heating arrangement is used, sections up to 12 sq. in. can be welded. The following data give a general idea of the performance of the machine:—

Sectional Area	Welding Time	Current Consumption
1 sq. in.	12 sec.	8 welds per kWh.
4 sq. in.	1 min.	1 weld per kWh.
7 sq. in.	2 min.	1 weld for 3 kWh.
12 sq. in.	5 min.	1 weld for 8½ kWh.

The machine was purchased primarily for the welding of

* By courtesy of Sir Nigel Gresley, Chief Mechanical Engineer



Welding machine in operation at Doncaster works, L.N.E.R.

boiler foundation rings, but its merits and adaptability have proved so extensive that the work now covered is of a very wide scope, ranging from the welding of brake pull rods ($1\frac{1}{2}$ in. dia.) to foundation rings of $12\frac{1}{2}$ sq. in. cross sectional area; also included are such details as reversing rods, buffers, brake cross stays and pony truck radius bars. The machine described is classified by the manufacturing firm, A1 Electric Welding Appliances Limited, as the A1 No. B12 patent automatic flash-butt welding machine.

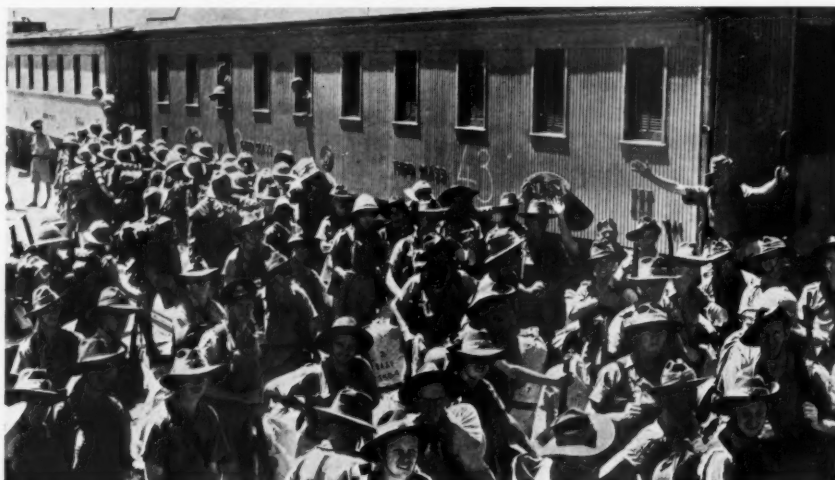
B.E.N. VACUUM RELIEF VALVE.—Users of vacuum vessels or receivers find it necessary to vary the degree of vacuum from time to time. B.E.N. Patents Limited of High Wycombe has produced an adjustable vacuum relief valve specially designed for this purpose which can be readily set to maintain a vacuum at any figure required from 4 in. to maximum. The valve is very sensitive, and the necessary adjustments to determine the vacuum at which it operates are readily made.

Railways and the War—42



Left: Some of a load of about 100 six-ton tanks on flat wagons leaving Rock Island, Illinois, on October 1 for delivery to Canada. These tanks were made during the war of 1914-19, and are to be used for training Canadians; their speed of about 4 m.p.h. is too slow for combat units. They have been stored at the Rock Island U.S.A. Government Arsenal

Right: An Australian contingent waiting to board a train in the Middle East. These troops formed part of a large reinforcement recently conveyed by troopship from England to the Middle East Command



War Office Photograph: Crown Copyright Reserved



Above: Some of the 250 women now employed by the L.M.S.R. as goods porters in the Midlands and the North

Right: A woman on the staff of the L.M.S.R. in the West Country, believed to be the only woman in railway service driving a heavy horse dray



RAILWAY NEWS SECTION

PERSONAL

The Minister of Supply announces that Mr. John Cecil Budd and Mr. William Mure have been appointed Joint Controllers of Non-Ferrous Metals in succession to Captain the Rt. Hon. Oliver Lyttelton, D.S.O., M.C., on his appointment as President of the Board of Trade. Mr. Budd will give special attention to copper and lead and Mr. Mure to zinc and brass.

Mr. Oliver Lyttelton, President of the Board of Trade, has appointed Mr. H. J. B. Lintott to be his Private Secretary and Mr. R. B. Tippetts to be his Assistant Private Secretary.

Lt.-Colonel J. T. C. Moore-Brabazon, M.P., has resigned his position as Director and Chairman of the board of Briggs Motor Bodies Limited, owing to his recent appointment as Minister of Transport.

Under the Order in Council dated February 6, 1928, the Lord President of the Council has appointed Prof. A. V. Hill, O.B.E., Sc.D., LL.D., M.D., D.Sc., Sec.R.S., M.P., Sir Felix Pole, and Prof. Sir Robert Robinson, D.Sc. LL.D., F.I.C., F.R.S., to be members of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research. Dr. W. H. Mills, F.R.S., Prof. A. Robertson, D.Sc., M.I.Mech.E., M.Inst.C.E., F.R.S., Prof. Sir Albert Seward, Sc.D., D.Sc., LL.D., F.R.S., and Sir Harry Shackleton, have retired from the council on completion of their terms of office.

In the third Supplement to *The London Gazette* of October 11, 1940, it is announced that Colonel (Hon. Brig.-General) Sir H. Osborne Mance, K.B.E., C.B., C.M.G., D.S.O., having attained the age limit of liability to recall, ceases to belong to the Reserve of Officers.

We regret to record the death in Buenos Aires on August 15, at the age of 58 years, of Mr. Stephen C. Angel, formerly Store Superintendent of the Buenos Ayres Great Southern and Buenos Ayres Great Western Railways.

Mr. P. R. Blake has been appointed a Director of the Devon General Omnibus & Touring Co. Ltd., the Rhondda Transport Co. Ltd., and the Western Welsh Omnibus Co. Ltd.

We regret to record the death in London on October 15 of Dr. Charles Hesterman Merz, Consulting Engineer and Senior Partner in the firm of Messrs. Merz & McLellan. Dr. Merz was born at Gateshead in 1874; his father was the late Dr. J. Theodore Merz, Ph.D., D.C.L., LL.D., and his mother was the daughter of Edward Richardson, of the famous Tyneside family of shipbuilders. He was educated at Bootham, York, and Arm-

the first to use 3-phase distribution in England. About this time Dr. Merz took into partnership Colonel William McLellan, who had been associated with him in his work on Tyneside, and so founded the firm of Messrs. Merz & McLellan. This happy partnership existed until the death of Colonel McLellan in 1935. In 1903 Dr. Merz acted as Engineer to the North Eastern Railway for the electrification of the Tyneside lines, one of the first two

English main-line railways to electrify part of its system. At the same time he designed the Carville power station. In 1907 he visited Australia to advise the Victorian Government on the introduction of electric traction, and he drew up an extensive scheme for the electrification of the Melbourne suburban railways. Two years later he went to Argentina to report on the adoption of electric traction in the neighbourhood of Buenos Aires. He visited India in 1913 at the invitation of the Governor of Bombay, to report on the electrification of the suburban railways round Bombay, which was successfully completed by his firm and was followed by the extension of electrification of the main-line railway over the Ghats using electric locomotives. During the war of 1914-1919, General Smuts and Sir William Hoy arranged with Dr. Merz to investigate and report upon the use of electric traction on the main-line railways in South Africa. After the war the scheme was proceeded with in Natal and the longest section of railway in the British Empire to be electrified was inaugurated; the system adopted was 3,000 volts d.c. The Cape Town suburban railways were also electrified, but on the 1,500-volt d.c. system. As a result of investigation by Messrs. Merz & McLellan in 1916 on the electrification of the North Eastern

Railway system, large electric locomotives were first used on a British main-line railway—the Newport—Shildon mineral line. In 1925 Dr. Merz prepared and put before the Electricity Commissioners a memorandum on the engineering features and economic advantages of a scheme of electric trunk mains in England and Scotland. This resulted in the appointment of the Weir Committee, before which he was the first witness. The Weir Committee Report was accepted by the Government and embodied in the Act of 1926 setting up the Central Electricity Board and the construction of the Grid. In 1921 and 1927 Dr. Merz served on two



Elliott]

The late Dr. C. H. Merz

Consulting Engineer and Senior Partner of Messrs. Merz & McLellan

[G Fry

strong College, and in 1898, after training and experience in Newcastle, Lincoln, London, Ireland, and other places, he acted as Engineer for the promotion of a Bill for supplying electric power to works and shipyards on the Tyne. Thereafter, throughout his career, Dr. Merz was closely connected with the development of electric power supply and electric traction, and particularly with the necessary legislative steps. The Tyneside power scheme of 1898 was the first undertaking in England begun primarily for electric power supply as distinct from electric lighting. Subsequently he acted as Engineer for the company, which was

Government committees for the use of electric traction, which drew up regulations for and reported upon the application of electric traction to British railways. Dr. Merz was a member of many societies and institutions, and was Vice-President of the Institution of Electrical Engineers from 1912-1915. He was the Faraday Medallist for 1931, and received an honorary D.Sc. from Durham University in 1932.

A lifelong friend writes: Charles Merz had gifts which would have ensured success in several walks of life. He chose engineering, in which he attained a foremost position. The eldest son of Dr. J. T. Merz, the learned author of "The History of European Thought," his youth was spent in an intellectual circle with wide interests, which included Wigham Richardson, the well known shipbuilder (his uncle), Dr. Spence Watson (his uncle by marriage), and their many friends in public life. His mother belonged to a well-known North Country Quaker family. Distinguished as was his career and his work for the country in this and the last war, for which, characteristically, he declined any reward, many will remember him rather for other qualities. Merz's exceptionally orderly mind had both a remarkable faculty of seizing the broad essentials of a problem and an unusual capacity for accurate detail in its execution. The constant encouragement which he gave to all with whom he came in contact, both on his own large staff and outside, to make the utmost of their gifts and to aim high, his deep respect for knowledge in others, and his generous hospitality,



The late Mr. William Lionel Hichens

Chairman Cammell Laird & Co. Ltd., Director, London Midland & Scottish Railway and Metropolitan-Cammell Carriage & Wagon Co. Ltd.

were typical of his attitude to his fellow men. An appreciative employer—in every sense—and a warm friend, he combined deep religious feeling with a strong love of nature and in particular of the Lake District. In Charles Merz the country has lost a valuable citizen and a fine character. To his many friends the loss is irreplaceable.

We regret to record the death on October 14, as a result of enemy action, of Mr. William Lionel Hichens, Chairman of Cammell, Laird & Co. Ltd. Mr. Hichens was born in 1874 and educated at Winchester and New College, Oxford. He was a Member of the Egyptian Ministry of Finance and among many positions he has held may be cited those of Colonial Treasurer of the Transvaal, and Treasurer of the Inter-Colonial Council of the Transvaal and Orange River Colony. In 1907 he went to India as a Member of the Royal Commission on Decentralisation, and in 1909 was appointed Chairman of the Board of Inquiry into Public Service of Southern Rhodesia. During the war of 1914-1919 Mr. Hichens visited Canada on behalf of the Minister of Munitions to organise the Imperial Munitions Board. He was Chairman of the Central Council of the Association of Controlled Firms, an organisation which was formed to facilitate the settlement of questions arising as the result of the powers of control conferred on the Minister of Munitions by the Munitions Act, 1915. In 1924 he was appointed a Member of a Government Committee on National Debt problems. Mr. Hichens became Chairman of Cammell, Laird & Co. Ltd., in 1910. He was a Director of the Metropolitan-Cammell Carriage & Wagon Co. Ltd.; the English Steel Corporation Limited; the Patent Shaft & Axletree Co. Ltd.; the Commonwealth Trust Limited; and the London Midland & Scottish Railway Company. Mr. Hichens was a Trustee of the Carnegie United Kingdom Trust for about 20 years, and a Governor of Birkbeck College.



Left: Mr. George Mills, Divisional General Manager, L.N.E.R. (Lt.-Colonel R.E.) taking the salute at the march past of the 8th Battalion City of Glasgow (L.N.E.R.) Home Guard on October 6 (see page 442). Right: Lord Stamp inspecting a collection of more than 600 items of silverware, curios, antiques, etc., sent in by members of the L.M.S.R. staff throughout the line with a view to its being sold by the company and the proceeds handed to the Government for the prosecution of the war. Mr Ashton Davies, Vice-President, is on the left of picture, and Mr. W. H. Vine, Salvage Officer, on the right

TRANSPORT SERVICES AND THE WAR—61

Civilian casualties in air raids—Railway Spitfires—London Transport wartime changes—Increased harbour charges—European rail traffic—Australian A.R.P.—Irish air lines

The Ministry of Home Security announced on Friday last that during the month of September 6,954 civilians were killed and 10,615 seriously injured in air raids in the United Kingdom. So far as classified returns have been received, the totals are divided as follow:—

Killed
Men, 1,920; women, 2,210; children (under 16), 694.
Seriously Injured
Men, 4,178; women, 3,629; children (under 16), 675.
Of the remaining 2,130 killed, 1,157 were males and 973 were females. Of the remaining 2,133 seriously injured, 1,231 were males and 902 were females.

Since the large-scale bombing attacks on this country began on June 18, the total civilian casualties have been:—

	Killed	Injured	Total
June	78	155	233
July	258	321	579
August	1,075	1,261	2,336
September	6,954	10,615	17,569
Total... ..	8,365	12,352	20,717

Spitfire Given by L.N.E.R. Staff

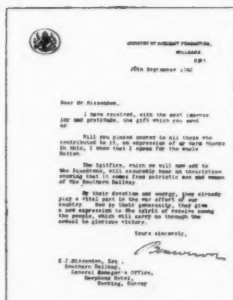
The Flying Scotsman is the name which the members of the L.N.E.R. staff have asked to be given to a Spitfire which they are providing for the nation. They also ask that the plane should bear the company's totem, the lozenge-shaped emblem embossed with the initials "L.N.E.R." Mr. C. H. Newton, Chief General Manager of the L.N.E.R., sent Lord Beaverbrook a cheque for £5,000 on October 10 for the purchase of the aircraft. The money has been contributed by staffs of all grades. This is the first aircraft to be provided by the L.N.E.R. staffs under their voluntary aircraft purchase scheme to which we made reference at page 285 of our September 13 issue.

The Southern Railway Spitfire

The first railway to send a cheque for £5,000 to the Minister of Aircraft Production for a Spitfire was the Southern Railway, as we recorded briefly at page 377 of our October 11 issue. All ranks of Southern railwaymen and women from directors to signal box lads and members of asso-

OUR SOUTHERN "SPITFIRE"

A Letter from LORD BEAVERBROOK



I feel sure that all the Southern Railway men and women who so speedily responded to the call for £5,000 will find grounds for special pride in the terms of Lord Beaverbrook's generous communication. I have thanked him for it on your behalf.

Well Done S.R.

C. H. Newton
General Manager.

ciated companies have subscribed to the fund. The aircraft is to be named the *Invicta* after the first locomotive on the Canterbury & Whitstable Railway in 1830, the forerunner of the Southern Railway system. The letter of thanks which Mr. E. J. Missenden, General Manager of the Southern Railway, received from Lord Beaverbrook, the Minister of Aircraft Production, has now been embodied in a new Southern Railway poster which also contains a brief message from Mr. Missenden; this poster we reproduce herewith. The text of Lord Beaverbrook's letter is as follows:—

Ministry of Aircraft Production,
Millbank, S.W.1

28th September, 1940

Dear Mr. Missenden,

I have received, with the most immense joy and gratitude, the gift which you send us.

Will you please convey to all those who contributed to it, an expression of my warm thanks. In this, I know that I speak for the whole Nation.

The Spitfire, which we will now add to the Squadrons, will assuredly bear an inscription showing that it comes from patriotic men and women of the Southern Railway.

By their devotion and energy, they already play a vital part in the war effort of our country. Now by their generosity, they give a new expression to the spirit of resolve among the people, which will carry us through the ordeal to glorious victory.

Yours sincerely,
BEAVERBROOK

E. J. Missenden, Esq.,
Southern Railway,
General Manager's Office,
Deerpene Hotel,
Dorking, Surrey.

Increased Seasonal Foodstuff Traffic

This year, partly because of the exceptional crops and the Government's "grow more food" appeal, the L.N.E.R. reports record seasonal foodstuff loadings. An indication of the increased tonnages being dealt with is given by the fact that on a small section of this railway system serving a portion of Lincolnshire 300,000 tons of potatoes were handled during the first eight months of this year as against 160,000 tons in the previous year, and 40,000 tons of grain compared with 11,000 tons in 1939. Grain in stacks and potatoes in heaps are being stored on the farms in large quantities for future consumption, and the task of lifting an enormous acreage of sugar beet has begun.

Opening Underground Stations during Air Raids

The London Passenger Transport Board announced on October 19 that it had been found possible to make arrangements whereby the following Underground stations would not be closed as hitherto during the period of an air raid warning: Arsenal, Green Park, and Hyde Park Corner, on the Piccadilly Line; Chancery Lane and Marble Arch on the Central Line; Old Street on the Northern Line; and Maida Vale on the Bakerloo Line.

London Transport Wartime Changes

Two new war measures to assist passengers to travel more quickly to and from work have been introduced by the London Passenger Transport Board during the past few days. On Wednesday last, October 23, four Green Line coach routes were divided in London instead of running through Central London. The object is to make possible more regular running. The routes as running heretofore were: A1 (Ascot and Gravesend), A2 (Sunningdale and Gravesend), C (Chertsey and Tunbridge Wells), and H (Luton and East Grinstead). Each route in effect has become two routes, and the London terminus in every case is Eccleston Bridge, Victoria.

On Thursday (October 24) between 7.15 a.m. and 9 a.m.,

and 4 p.m. and 6 p.m., a number of buses on ten busy routes began to run express between the inner suburbs and selected points in Central London. They are specially marked and special queues are formed for them. The object is to provide buses for the long-distance passengers approximately every 10 min. into London in the morning and out at night on each of the ten routes. The buses run express over the inner sections of the routes, stopping only at one or two intermediate points where large numbers of passengers are normally picked up or set down. Beyond the express sections, the buses stop at the customary stopping places. The scheme is experimental and may be reviewed in the light of experience.

By arrangement with the Ministry of Transport, bus undertakings operating in Scotland, the provinces, and other places outside the London area, are lending up to 2,000 buses to the London Passenger Transport Board to help workers to travel more speedily to and from work. They will be manned by the board's drivers and conductors. The first of these buses (from Halifax) was placed in service on route 11 (Liverpool Street to Shepherds Bush) and route 25c (Forest Gate to Victoria) in time for the evening peak period on Wednesday last, October 23.

Increased Harbour Charges

The Minister of Transport has made an Order under the Emergency Powers (Defence) Act increasing the rates, dues, and other charges which the four main-line railway companies and any joint committee of any two or more of them may levy at the harbours, docks, and piers owned by them. Charges on coasting liners, when carrying mixed cargoes of merchandise and operating on regular scheduled services, and on the cargoes of these liners, in force on August 31, 1939, may be increased by not more than $7\frac{1}{2}$ per cent. All other charges in force on that date may be raised by not more than 20 per cent. The Order does not apply to labourage charges which have been varied since September 3, 1939, or which may be varied during the currency of the Order in consequence of alterations in rates and wages; and any charges in respect of through traffic which have been increased or may be increased under the provisions of the Railways (Additional Charges) Order, 1940, or any Order modifying it. The undertakings affected by the Order now made are as follow:—

Aberdovey Harbour.	Highbridge Dock.
Barry Docks.	Dunball.
Brentford.	Fishguard Harbour.
Bridgewater Dock.	Llanelli Dock.
Briton Ferry Dock.	Newport Docks.
Burry Port.	Penarth Harbour and Dock.
Bute Docks, Cardiff.	Plymouth Docks.
Alloa Harbour and Dock.	Port Talbot Docks.
North Blyth Staiths.	Swansea Docks.
South Blyth Staiths.	Harwich Quays and Piers.
Bo'ness Harbour and Dock.	Hull Docks.
Burntisland Harbour and Docks.	Immingham Dock.
Charlestown Harbour.	Lowestoft Harbour.
Connah's Quay Dock.	Mallaig Piers.
Craigendron Pier.	Methil Harbour and Docks.
Dunston Staiths.	Middlesbrough Dock.
West Dunston Staiths.	Parkeston Quay.
Grimsby Docks.	Percy Main (Northumberland Dock)
The Docks at Hartlepool and West	Staiths.
Hartlepool.	Pettycur Harbour.
Ayr Harbour.	Silloth Dock.
Barrow Harbour and Docks.	Winteringham Haven.
Bowling Harbour.	Kincardine Pier and Harbour.
Deganwy Wharf.	Heysham and Morecambe Harbours.
Fairlie Pier.	Holyhead Harbour.
Fleetwood Harbour.	Kentallen Pier.
Wyre Docks.	Kyle of Lochalsh Pier.
Fordy Wharf.	Largs Harbour.
Garston Docks.	Oban Pier.
Gourock Pier.	Poplar Docks.
Grangemouth Harbour and Docks.	Renfrew Wharf.
Gravesend Floating Stages.	Stranraer East Pier.
Cowes (Medina Wharf).	Tilbury Floating Stage.
Folkestone Harbour.	Troon Harbour.
Gravesend Pier and Basin.	Wemyss Bay Pier.
Langston Wharf.	Ryde Pier.
Newhaven Harbour.	St. Helens Wharf.
Port Victoria.	Southampton Docks.
Queenborough Pier.	Stonehouse Pool.
Chelsea Basin.	Stroud Dock.
Lydney Harbour and Dock.	Whitstable Harbour.

L.N.E.R. Home Guard Glasgow Battalion on Parade

The 8th Battalion City of Glasgow Home Guard, comprised of volunteers from all grades of L.N.E.R. staff, paraded at Garscube Estate, Glasgow, on Sunday, October 6. The men in the battalion are drawn from the districts

extending from Glasgow to Helensburgh and Mallaig and from Glasgow to Bathgate and Ratho. The salute was taken by Mr. George Mills, Lt.-Colonel R.E., Divisional General Manager (Scottish Area) of the L.N.E.R., who, after the march past, gave an address to the battalion, in which he referred to the adaptability of the railways to serve as an active wartime instrument. It was not without significance that, although the Government had taken over the railways, it had left the very important and vital day-to-day movement of goods and services in the hands of those who had spent their lives at the work. No better example of unity, loyalty, and willingness to work with one another could be found than in the Home Guard. Among L.N.E.R. officials present at the inspection were Mr. T. E. Heywood, Mechanical Engineer, Scotland, Mr. G. S. Begg, Passenger Manager, Scottish Area, and Mr. John M'Kenzie, District Superintendent, Glasgow. The battalion is under the command of Mr. W. H. Underwood, Acting Assistant District Locomotive Superintendent.

Tickets for Air Raid Shelters

Mr. Herbert Morrison, the Minister of Home Security, announced on October 21 that he had authorised the London Civil Defence Region to experiment in the issue of tickets of admission to some of those public shelters in the London Region which are used for sleeping. The main object is to avoid queues outside shelters, or arrival of persons in the shelter many hours before nightfall in order to reserve places. As there are special difficulties involved in the issue of shelter tickets for tube stations, these are excluded from the scheme for the present.

Food for Shelterers in Underground Stations

In collaboration with the Ministry of Food, the London Passenger Transport Board has undertaken to be responsible for the provision of food for persons sheltering in Underground stations. The detailed arrangements are now under discussion with the Ministry of Food.

Decision on Increase in Charges

The report of the Charges (Railway Control) Consultative Committee on the recent proposals by the Railway Executive Committee for increased charges to make good rises in costs resulting from the war, has now been considered by the Minister of Transport. The Minister, Lt.-Colonel J. T. C. Moore-Brabazon, has just reached his decision on the matter and this he announced in the House of Commons on October 23 in response to a Question by Mr. Ridley (Clay Cross—Lab.). He said that the report of the committee was being printed and that copies would be available in a few days. The committee's main recommendations were that there should be no increase in charges for workmen's tickets, season tickets, or in ordinary fares on the London Passenger Transport Board system, except coach fares. All other fares should be increased by approximately 6 per cent. This would have the effect of raising the 10 per cent. increase which came into force on May 1 to 16½ per cent. above the pre-war level. The Government had decided to accept these recommendations and he would make an Order accordingly.

We are officially informed that the higher level of charges will come into effect on December 1.

A Paris Transport Board

A law published in the French Official Gazette provides for the fusion of the underground railways and the motorbus undertakings in Paris, says a Paris message to the Official German News Agency.

Transport in France

It was announced from Vichy on October 9 that, on account of scarcity of coal in unoccupied France, passenger train services would be further curtailed.

The 300-ft. viaduct near Evires on the La Roche-sur-Foron to Annecy railway is stated to have been re-opened for traffic on October 20. This viaduct was severely damaged on September 3 (see page 286 of our September 13 issue) as the result of an explosion; sabotage was suspected.

According to the Swiss radio, direct train services between

Switzerland and France were resumed on October 21. It was also stated that the resumption of regular goods traffic on the railway between Bellegarde and Geneva might be expected shortly, thus improving communications between Switzerland and France.

On October 8 the German Governor of Alsace-Lorraine opened a new bridge across the Rhine between Strasbourg and Kehl; presumably this is a road bridge. At the opening ceremony he is stated to have said: "This bridge links German tribes who inhabit both right and left banks of the Rhine and belong to one another racially, linguistically, and culturally."

Franco-Spanish Traffic

Direct railway communication between Madrid and the frontier station of Cerbere, where connection is effected with the French National Railways, is stated to have been resumed on October 8. At the same time direct communication is also reported to have been established by this route between Spain and Italy, *via* France. Reference to the intended re-establishment of railway connections between Spain and "unoccupied" France was made at page 395 of our October 11 issue.

Transport in the Balkans

It would appear from press reports reaching this country through neutral sources that widespread disorganisation of passenger services throughout the Balkans has resulted from the virtual military occupation by Germany of what remains of Roumania after the various recent cessions of provinces to neighbouring States. According to a Bucharest message, 65 passenger trains, many on important main lines, were suspended from midnight on October 16-17. The official explanation of this measure was that it was necessary to provide train paths for additional goods traffic needed to transport supplies for internal needs that have been neglected in consequence of military requirements. It is noteworthy, however, that the measure coincided with heavier German demands for oil. In Yugoslavia 86 passenger trains were cancelled from October 23, also with the avowed object of facilitating goods traffic. Here again it is suggested that the German demands for accelerated transport of oil are mainly responsible.

Germany and Baltic States

According to a Berlin message to the Finnish newspaper *Helsingin Sanomat*, negotiations between Germany and Russia to establish normal trade relations between Germany and the Baltic States have been interrupted. Railway traffic between Königsberg, Riga, and Kaunas is stated to have been stopped, and sea traffic between Germany and Baltic ports to have ceased.

Neutral sources report that the conversion to the Russian 5-ft. gauge of all 4 ft. 8½ in. gauge Latvian railways connecting with Lithuanian lines is proceeding steadily.

Railways and Turkish Census

On October 20 a nation-wide census was taken in Turkey, and there was a general standstill for some hours to facilitate this. It is reported from Istanbul that train, tram, and bus services were suspended during the period of the census.

Passengers whose trains arrived after the count had begun were required to remain at the stations until the standstill period was over. This census, the first since 1935 and the third since the Revolution, began at 5 a.m. and was completed during the afternoon.

Air Force Recruiting Train in Western Australia

To provide greater facilities for country applicants to join the Royal Australian Air Force, a train has been fitted out as a complete mobile recruiting depot, and is now in operation on the Western Australian Government Railways. The train carries a full staff to enable medical examinations, interviews, and trade tests to be carried out. The work of converting the train was carried out in the railway workshops at Midland Junction. The train consists of three "AG" type carriages and a brakevan. The carriages are painted a dark red, and, in bold lettering of the familiar Air-Force blue, light blue, and red, "R.A.A.F." is painted on both sides of the first carriage, "Recruiting" on the second, and "Train" on the third. Concentric rings in red, white, and blue on both sides of each carriage complete the colour scheme. The carriages have been arranged and installed with equipment for various phases of recruiting work. The first car contains the medical office, a dark room for eye testing, and a waiting room; the second has accommodation for interviewing applicants, for the air crew committee, and for trade testing; the third carries the general staff, consisting of the inquiry office, enlistment officer, man power officer, records, and orderly room. A complete lighting set for the whole of the recruiting train is carried in the brakevan.

Air Raid Precautions in Australia

According to the Sydney radio, the possibility of air raids on Sydney, New South Wales, although regarded as somewhat remote, has not been overlooked, and plans have been prepared to make special entrances to the underground railways in the city so that members of the public could reach the tunnels quickly to take shelter. In addition, public shelters are being planned and direction signs to shelters and first aid posts are ready for erection. A scheme is being evolved for the evacuation of children.

Aer Lingus

A substantial increase in the number of passengers carried between Great Britain and Eire is shown in the latest traffic return that has been issued by Aer Lingus Teoranta (Irish Air Lines). With travel between England and Ireland severely curtailed by reason of the war, it might have been expected that the company would have reduced its operations and had a decreasing passenger list. Actually a total of 3,556 passengers was carried in the six months ended September 30. This represents an increase of 263 passengers, compared with the corresponding six months, April to September of 1939—a period that, except for one month, was in the pre-war era. The 1939 passenger total included 1,098 persons carried in the service to and from the Isle of Man. In the last war the Isle of Man was used for the internment of German prisoners of war; this time it is a place for the concentration of various classes of aliens. This summer there was accordingly no air service from Eire.

MARYLAND POINT STATION.—The L.N.E.R. has announced that from October 28 Maryland Point station will be renamed Maryland.

AIR-CONDITIONED PASSENGER CARRIAGES IN THE U.S.A.—Class I U.S.A. railroads and the Pullman Company had 11,986 air-conditioned passenger cars in operation on July 1, 1940, according to reports just received by the Association of American Railroads. This was an increase of 635 compared with July 1, 1939, and a gain of 271 since January 1 of the present year.

Of the total of such vehicles Class I railroads on July 1 of this year had 6,852, an increase of 525 compared with the same date last year. The Pullman Company on July 1 of this year had 5,134, a rise of 110 compared with July 1, 1939.

FUSION OF G.M. & N. AND M. & O. RAILROADS, U.S.A.—On September 13, the Gulf, Mobile & Northern and the Mobile & Ohio Railroads were combined to form a new system called the Gulf, Mobile & Ohio Railroad with a total route-mileage of 2,026 miles. The

Mobile & Ohio main line connects St. Louis with Mobile *via* Jackson and forms—with the Chicago, Burlington & Quincy—a through route from Chicago to the Gulf of Mexico. The Gulf, Mobile & Northern parallels the M. & O. from Jackson to Mobile, but also has an important branch to New Orleans. The M. & O. is a subsidiary of the Southern Railroad, but it went into receivership in 1932. As we recorded at page 416 of our October 18 issue, Mr. I. B. Tigrett is President of the new company; he was formerly President of the G. M. & N. system.

PARLIAMENTARY NOTES

Wartime Use of Transport Facilities

In the House of Commons, on October 8, during the debate on the war situation, Mr. C. C. Poole (Lab.—Lichfield) raised the question of use of transport during the war. He said:—

I have risen primarily to deal with an aspect of the war situation at home which I have endeavoured to ventilate through orthodox channels and have failed, an aspect of the war problem at home on which I want to utter a word of warning, because I feel that those who are responsible do not realise the serious position which might arise in this branch of our war effort. I want to refer to the question of transport. It is completely useless for the industries of this country to do what the rt. hon. member for Devonport (Mr. Hore-Belisha) has been asking—to work and produce the necessary arms and equipment for the Fighting Forces or for recruiting an army of 1,500,000 or 2,000,000 men—unless you are able to bring the arms, equipment, and material which the factories produce to the men who need them. Transport facilities are fundamentally vital on an island as small as this.

After full consideration and some experience of the matter, I feel that we are trifling still with the transport problems of this country and that the War Office is not even yet alive to the grave danger that may arise to this country unless it endeavours more speedily to assess the possibility of the damage which might be inflicted upon the rail communications of this country. We have been extremely fortunate up to the present. There have been minor interruptions here and there, but a concentrated attack upon some of the key junctions of this country can completely dislocate and disorganise the whole of the rail facilities of the country. Transport is vital and would be fundamentally vital if an invasion ever came. It is vital when we are required to equip men speedily for expeditions overseas. Yet in this essential branch, where it is necessary that the men should be key men, that you should have men who are at any rate to some degree *au fait* with what is required, there are still being recruited into this branch of our war effort men who have absolutely no knowledge whatever of transport problems and have never been associated even in the most indirect way with transportation.

What is the determining factor in the selection of men and their placing in responsible positions at the present time? I should like to have an analysis placed before me as to the people who are performing important technical functions in the War Office and what relation those functions bear to the whole of their civil experience in the years leading up to the war. I think that would be very revealing. What arrangements have been made, or in whose hands lies the responsibility, for

traffic diversions at the present time when sections of rail are put out of commission? Who is responsible for making those diversions? I will assert definitely that it is no one's responsibility at the present time.

Who is responsible for alternative routing when sections of rail have been destroyed and urgent Government stores have to be sent to a particular unit? I ask that inquiries should be made into that point, because a serious position will arise on the first occasion on which there is heavy bombing of a vital section of railway line. I want to ask why the Air Ministry desires to remain apart from any control of its movements through the usual movement control channels? Who is responsible for diverting Air Ministry traffic when it cannot be taken to its correct destination? I do not know how long it is since London suffered the attack upon the docks, but it is illuminating to know that there are Air Ministry stores which were under load to be brought to those docks in London when that attack was made and which could not be brought because it was no longer possible to load it there, for which instructions are still, today, awaited from the Air Ministry. It seems to be nobody's concern to divert that traffic to an alternative port in order that it may reach its destination. These may perhaps seem trifling things to the House, but when such instances are multiplied time and time again, and that is what is happening, it becomes a vitally important matter.

There is also a criminal waste of transport in this country. The waste of transport facilities in peacetime was bad enough, but in wartime it is atrocious that we should waste vital road transport as we are doing. What is the position? The four railway groups have been co-ordinated under the Railway Executive Committee, though they still apparently function as private enterprise. Their responsibility in relation to the movement of war materials comes under the War Office Movement Control, which has its movement control officers. Road transport is under the Royal Army Service Corps, and its utilisation is in the hands of traffic officers in various depots up and down the country. There is no co-ordinating body between rail and road. We are foolishly wasting thousands of gallons of petrol while at the same time asking the ordinary motorist to do with five, six, seven, or eight gallons of petrol a month. We are sending lorries up to the North of Scotland, loaded with camouflage netting for which there is no urgency. I could take members to a depot into which huge transport lorries are conveying—what? What urgent Government stores? Conveying empty wooden cases. They are brought in by road transport, by 10-ton lorries with an enormous petrol consumption. Yet if there is one wooden

case in that depot there are probably half-a-million cases waiting to be used which have been out in the weather all through last winter and will be out in the weather this winter and will not be of much use for anything but firewood by the spring. Whose responsibility is it? When are we to have co-ordination of all forms of transport?

Is it not ironical that a movement control officer should have a special train going to Glasgow tomorrow morning on which he could take every article there is from a particular point to another point, a train which could convey every pound of stores which has to go, and yet to find that the Royal Army Service Corps has sent a road transport vehicle all through the filth of a dirty night, 36 hours' driving, up to Glasgow because there has been no liaison? Is it nobody's function in wartime to see that the best use is made of all the facilities we have? We cannot afford to waste transport. We have no right to send men up to the North of Scotland with a ton or a ton-and-a-half of stores when there are rail facilities. I ask for the fullest co-ordination. Quite frankly, I am prepared to ventilate this matter on the floor of the House until we have co-ordination in transport and there is some cohesion in the transport arrangements.

There is another matter which has a bearing upon what the rt. hon. member for Devonport has said on the need for the maintenance of production. I was rather amused when he spoke of the great increase of production after the change of Government. I was in a position in which I experienced it. The Ministry of Supply and its contractors suddenly woke up and there was an enormous output of stores—but there was nowhere to put the stores. It was my experience to have hundreds of railway wagons loaded with stores immobilised for weeks and weeks because there was no storage accommodation. After waiting weeks and weeks instructions came to send the stores to B, and B had them for a few days, and then sent them to C, and eventually some of them found their way back to A. That is an instance of the great wastage of transport facilities. It is wasteful in immobilising railway rolling stock and that is a very serious matter. What steps are being taken to provide additional rolling stock? If anything is being done it has not been manifest during the past few days, because there has been the greatest difficulty in obtaining rolling stock.

SPANISH FLOODS WRECK TRAINS.—It is reported from Madrid that heavy rains caused the banks of the rivers Ter and Onar to burst. Coaches of a train from Barcelona were plunged into the water when a bridge over the river Ter collapsed. Another train, from Figueras, was derailed, and a third train was struck by a landslip while on a bridge over the river Fluvià.

QUESTIONS IN PARLIAMENT

River Thames Passenger Service

Mr. A. P. Herbert (Oxford University—Ind.), in the House of Commons on October 8, asked the Minister of Transport why the pier authorised by him to be built at Putney last autumn had not been built; and whether, having regard to recent events, he would arrange for landing places to be provided at this and other necessary points forthwith.

Mr. F. Montague (Parliamentary Secretary to the Ministry of Transport) wrote in reply: As my hon. friend knows, the proposal for a pier at Putney was considered in connection with the casualty service and rejected on merits. I fear that the extent to which the existing river passenger service is used by the public does not warrant its extension. Lack of patronage and difficulties of operation may even make it necessary to discontinue it altogether.

Workmen's Railway Fares

Mr. A. Woodburn (Clackmannan and Eastern—Lab.), on October 9, asked whether the Minister of Transport was aware that railway companies were observing literally the hours of limitation for workmen's cheap facilities which, with unavoidable delays, in many cases meant the virtual cancellation of the concession; and whether he was prepared to arrange for the necessary elasticity in the concession.

Lt.-Colonel J. T. C. Moore-Brabazon (Minister of Transport): The railway companies and the London Passenger Transport Board issue workmen's tickets, on production of the necessary identification, at any time on Sundays to persons travelling between places of residence and places of employment, and at any time on week-days to artisans, mechanics and labourers working on shifts. They also allow an interval of 30 minutes after the " raiders passed " signal is given, when an air raid warning has been in operation during the hours workmen's tickets are normally issued. This interval is reasonably applied. Consideration will be given to voluntary A.R.P. and other Civil Defence workers who normally use workmen's tickets and, after being on duty during the night, travel to work after the issue of workmen's tickets has ceased. Special arrangements will be necessary and details will be announced shortly.

Mr. W. Thorne (Plaistow—Lab.): Is there any remedy for an individual who has a return ticket from one given place to another, but gets turned out at a station before he gets half-way to the end of his journey?

Lt.-Colonel Moore-Brabazon: I am afraid not.

Colonel Sir Lambert Ward (Kingston-upon-Hull North-west—C.): Is there any chance of these facilities being extended to members of the Home Guard?

Lt.-Colonel Moore-Brabazon: I will consider that suggestion.

[Since the Minister's reply, it has been announced that workmen's tickets are to be available for voluntary Civil Defence Workers (see p. 418) last week.]

Railway Depots Canteens

Mr. W. Dobbie (Rotherham—Lab.) asked the Parliamentary Secretary to the Ministry of Food whether instructions had now been issued to food control committees for the registration and licensing of railway companies' premises for the setting up of canteens where meals, including rationed foods, could be obtained, and for the issue of permits for obtaining supplies.

Mr. R. J. G. Boothby (Parliamentary Secretary to the Ministry of Food) in a written reply stated: Yes, Sir. No difficulty should now arise in regard to the provision of meals at railway booking-off depots where canteen facilities are available. Further canteens will be set up where possible at places where they are needed.

Travel Restrictions

Sir Leonard Lyle (Bournemouth—C.) asked the Minister of Transport whether he was aware that at present passengers wishing to spend holidays at South Coast resorts were in many cases allowed to make the journey from Waterloo only to be turned back on reaching their destination; and whether he would arrange for a clear instruction to be exhibited to all passengers at the London terminal station with regard to such prohibitions as now exist.

Lt.-Colonel J. T. C. Moore-Brabazon wrote in reply: Notices are already exhibited at all railway stations drawing attention to the restrictions on pleasure travel in various areas and giving a list of the stations serving those areas.

Accommodation for Armed Forces

Mr. H. Brooke (Lewisham West—C.) asked whether the Minister of Transport would make further enquiries to establish whether the railway staffs were using freely enough the latitude that had been given them to allow sailors, soldiers and airmen in overcrowded trains to use unoccupied first-class accommodation where available.

Lt.-Colonel Moore-Brabazon wrote in reply: The Railway Executive Committee has assured me that railway staffs have been carefully instructed in this sense. Members of the Forces are allowed to use available first class seats when third class accommodation is fully occupied.

Mr. H. Brooke also asked whether the Minister of Transport had yet been able to make arrangements with the Railway Executive Committee to ensure that sailors, soldiers and airmen travelling long distances by ordinary trains should be able to obtain food and drink in all restaurant cars and buffet cars at prices within their means.

Lt.-Colonel Moore-Brabazon in a written reply stated: The increase in the number of kitchen cars and staff which the adoption of my hon. Friend's suggestion would involve is impractic-

able under present conditions. The needs of members of the Armed Forces are being met by canteens and refreshment rooms, and those travelling long distances are, therefore, able to obtain food and drink at stations where stops are made.

Rochester Railway Bridge

Sir Irving Albery (Gravesend—C.) asked if the Minister of Transport had considered the desirability of taking down the derelict railway bridge at Rochester, which should provide a quantity of useful war material.

Lt.-Colonel Moore-Brabazon wrote in reply: It is true that one of the railway bridges at Rochester is not at present in use, but it is capable of use for either rail or pedestrian traffic if required, and I do not consider that it would be wise, in existing circumstances, to demolish it.

Tube Stations as Shelters

Mr. A. M. Lyons (Leicester East—C.) asked whether the Secretary of State for the Home Department could now make any further statement as to the use of certain tube railway stations as additional air-raid shelters in emergency conditions.

Mr. Herbert Morrison (Secretary of State for the Home Department) wrote in reply: So far as is consistent with public safety and with the over-riding necessity of maintaining the essential transport facilities provided by the London Underground system, the public are now allowed to use tube stations at night for shelter purposes. The amount of accommodation available must, however, be limited by the paramount need to preserve the tubes as a means of transport for the workers.

Railways Financial Agreement

Mr. G. Le M. Mander (East Wolverhampton—Lib.), on October 15, asked the Minister of Transport if he would now publish full details of the financial agreement between the Government and the railway companies, with a view to removing misconception.

Lt.-Colonel J. T. C. Moore-Brabazon (Minister of Transport) wrote in reply: The agreement is now in draft and under consideration by the parties. It will be necessary to take into account recent developments, including the statement made by the Prime Minister on October 8 on the Government's plan for dealing with war damage. I regret therefore that I am not yet in a position to say when the agreement will be published. I am not aware that there is any ground for misconception as to the arrangements published in outline in Command Paper 6168.

Mr. G. Ridley (Clay Cross—Lab.), on October 16, asked the Minister of Transport whether he would review the financial provisions for the Government control of railways specified in Cmd. 6168; and whether he was able to indicate to the House the nature of any alternative proposals he intended to make.

Lt.-Colonel Moore-Brabazon: As I have already explained in reply to the hon.

Member for Wolverhampton East, it is now necessary to take into account recent developments, and I regret therefore that I am not at present in a position to make any statement.

Mr. Ridley: Is the Minister aware of the increasing volume of criticism as to the way in which this agreement is now operating, and of the growing demand for the public ownership and control of the railways?

Lt.-Colonel Moore-Brabazon: I am quite aware of what my hon. friend has brought to my attention.

Railway Costs

Mr. G. Ridley (Clay Cross—Lab.), on October 16, asked the Minister of Transport whether he could now announce the terms of the Report of the Charges (Railway Control) Consultative Committee on the matter of increased railway costs; and what steps he proposed to take.

Lt.-Colonel Moore-Brabazon: I regret that I am not yet able to make any announcement on the matter but I hope to be in a position to do so very shortly.

Mr. George Griffiths (Hemsworth—Lab.): Does the Minister understand the disquiet of the public on this question, and will he keep the matter under consideration?

Lt.-Colonel Moore-Brabazon: Yes, Sir.

Accommodation for Armed Forces

Mr. W. Craven-Ellis (Southampton—Nat.), on October 16, asked the Minister of Transport whether he was satisfied that the rest and food arrangements made for the comfort and convenience of serving soldiers at the chief stations on the Southern Railway were adequate; and whether, in that connection, he was aware of the complaints by men in the services of the high prices charged in the restaurant cars.

Mr. R. K. Law (Financial Secretary to the War Office), who had been asked to reply to the question, in a written answer stated: The provision of rest and refreshment rooms at most stations used to any large extent by troops has

been completed; at others, it is proceeding. When the work is completed, I do not think there will be any ground for complaint. As to the second part of the question, I would refer to the answer given by the Minister of Transport to a question by the Member for West Lewisham (Mr. Brooke) on October 8.

A.R.P. Workers and Free Passes

Mr. R. W. Sorensen (West Leyton—Lab.), on October 16, asked the Minister of Transport whether he would institute a limited system of free railway passes for relatives who desired to visit evacuated women, children, and elderly parents; and whether he would enable members of air-raid precautions and Auxiliary Fire Service and similar services to secure free railway passes or reduced fares on the days they were exempted from duty.

Lt.-Colonel J. T. C. Moore-Brabazon: As to the first part of the Question I have nothing to add to the answer given by the Minister of Health to my hon. friend on August 15. On the second part I would suggest that my hon. friend should inform the Minister of Home Security of the circumstances in which he considers that A.R.P. workers and those engaged on similar duties should be given free passes or reduced fares, as any such concession would fall to be paid for out of public funds.

Personal Injuries (Emergency Provisions) Act

Mr. W. Dobbie (Rotherham—Lab.), on October 17, asked the Minister of Pensions if his attention had been called to the case of London & North Eastern Railway goods guard H. Truglia, who was suffering from shock as a result of four enemy bombs being dropped within a few yards of his brake-van on August 13 at Bottesford station; and whether he would give instructions that cases of shock should be brought within the definition of personal injury under the Personal Injuries Act, 1940.

Sir W. Womersley (Minister of Pensions): The Personal Injuries (Emer-

gency Provisions) Act, 1939, covers cases of shock which are associated with physical injury, including concussion, resulting directly from war-operations. I have had careful enquiry made into the case of Mr. Truglia and am advised that at the time in question he was 350 yards from the nearest bomb explosion and suffered no physical injury therefrom.

British and Irish Railway Stocks and Shares

Stocks	Highest 1939	Lowest 1939	Prices	
			Oct. 22, 1940	Rise/ Fall
G.W.R.				
Cons. Ord.	38	21½	33	+2
5% Con. Pref.	92	71	75	—
5% Red. Pref. (1950) ..	98	83	93½	—
4% Deb.	103	91	102	+½
4½% Deb.	105½	93½	103½	—
4½% Deb.	110	99	108½	—
5% Deb.	121	109½	112½	—
2½% Deb.	63½	54	62	—
5% Rt. Charge	117	104	111½	+1
5% Cons. Guar.	111	96½	104½	+1
L.M.S.R.				
Ord.	17	9½	13½	+1
4% Pref. (1923)	46½	20	35½	—1
4% Pref.	63½	37½	47½	+2
5% Red. Pref. (1955) ..	83	58½	73½	—
4% Deb.	98½	85	92	+1½
5% Red. Deb. (1952) ..	109	101½	106	—
4% Guar.	87½	73	77	+2½
L.N.E.R.				
5% Pref. Ord.	5½	3½	3½	+½
Def. Ord.	3½	1½	1½	+½
4% First Pref.	38½	19	32½	+1
4% Second Pref.	15	7½	10	—
5% Red. Pref. (1955) ..	55	38	50	—
4% First Guar.	78½	60	67	+1
4% Second Guar.	68½	47	57	+3½
3% Deb.	71½	57	63	—
4% Deb.	93	76	83	+1
5% Red. Deb. (1947) ..	106½	98	102	—1
4½% Sinking Fund Red. Deb.	104½	96	99½	—
SOUTHERN				
Pref. Ord.	78	46½	41½	+1
Def. Ord.	19½	7	10½	+1
5% Pref.	100	76	73½	+1½
5% Red. Pref. (1964) ..	102½	94	87½	—
5% Guar. Pref.	116½	103	105½	+1
5% Red. Guar. Pref. (1957) ..	112½	102½	102½	—1
4% Deb.	103	91½	94	+1½
5% Deb.	118½	109½	110½	—2
4% Red. Deb. (1962-67) ..	106	98	101½	—1
4% Red. Deb. (1970-80) ..	102	96	100½	—
FORTH BRIDGE				
4% Deb.	98½	81	87½	—
4% Guar.	95	80	85½	—
L.P.T.B.				
4½% "A"	115	103	106	+1
5% "A"	123	106½	113	—½
4½% "T.F.A."	105	100½	103	+1
5% "B"	117½	102	104½	+2
"C"	84	63½	27	—½
MERSEY				
Ord.	24½	17½	20½	—
4% Perp. Deb.	93½	88½	89	—½
3% Perp. Deb.	77	65½	59½	+9
3% Perp. Pref.	55	49½	54½	—
IRELAND BELFAST & C.D.				
Ord.	6	3	4	—
G. NORTHERN				
Ord.	6	2½	3	—½
G. SOUTHERN				
Ord.	13½	8	5	—1
Pref.	26	10	18	—2
Guar.	40½	22	18½	—1½
Deb.	57	45½	42	+3

Irish Traffic Returns

IRELAND		Totals for 41st Week			Totals to Date		
		1940	1939	Inc. or Dec.	1940	1939	Inc. or Dec.
		£	£	£	£	£	£
Belfast & C.D. (80 miles)	pass.	3,114	2,266	+ 848	137,022	110,331	+ 26,691
	goods	862	591	+ 271	24,688	18,976	+ 5,712
	total	3,976	2,857	+ 1,119	161,710	129,307	+ 32,403
Great Northern (543 miles)	pass.	12,300	10,200	+ 2,100	510,950	476,400	+ 34,550
	goods	15,100	14,950	+ 150	531,000	440,600	+ 90,400
	total	27,400	25,150	+ 2,250	1,041,950	917,000	+ 124,950
Great Southern (2076 miles)	pass.	32,054	30,951	+ 1,103	1,484,907	1,562,815	— 77,908
	goods	56,431	61,703	— 5,272	1,896,273	1,759,409	+ 136,864
	total	88,485	92,654	— 4,169	3,381,180	3,322,224	+ 58,956
L.M.S.R. (N.C.C.) (247 miles)	pass.	4,900	4,000	+ 900	237,760	197,090	+ 40,670
	goods	4,930	3,830	+ 1,100	163,210	123,000	+ 40,210
	total	9,830	7,830	+ 2,000	400,970	320,090	+ 80,880

OFFICIAL NOTICES

OFFICIAL ADVERTISEMENTS

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is noon on Wednesday. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W. 1.

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NOTES AND NEWS

Bengal & North Western Railway Co. Ltd.—The transfer books of the 3½ per cent. preference and 4 per cent. second preference stocks will be closed from November 9 to 23 (both days inclusive) for the preparation of dividend warrants.

L.M.S.R. Express Derailed.—The locomotive of a northbound express from Euston, L.M.S.R., travelling, in accordance with regulations, at a low speed recently, was overturned. The first two coaches were slightly damaged, and the only casualty was the fireman, who was taken to the hospital with injuries.

Workmen's Compensation Appeal.—The Second Division of the Scottish Court of Session dismissed on October 10 an appeal by the L.N.E.R. and L.M.S.R. companies against an award by the Dundee Sheriff-substitute of £600 compensation to the widow of a railway employee. The Sheriff-substitute, sitting as arbitrator, had held that the perforation of the stomach ulcer from which the employee had died was caused by strain or exertion incidental to and in the course of the employment.

Railway Crossing Collision.—Judgment was given for the L.N.E.R. Company at Middlesbrough County Court on October 15 in an action by the Middlesbrough Town Council against the railway company for £91 damages in respect of a collision during the blackout on July 13 between a Corporation bus and an unlighted goods train at the Vulcan Street crossing. The judge said that the crossing was apparently in use before the road, its use by the railway company was not a nuisance, and the driver of the bus was negligent in assuming that the road in front of him was clear.

Paterson Engineering Co. Ltd.—At the annual general meeting on October 16, Mr. William Paterson, M.I.Mech.E., the Chairman, said that the company's equipment for purifying water supplies continued to operate with marked economy in running and maintenance cost. The company was engaged to the limit of its capacity on water purification work of all kinds. The volume of export work had continued to be satisfactory and the company had not sustained any appreciable financial loss by reason of enemy occupa-

tion of European countries. Loss of trade in these markets had been compensated by development at home.

Neepsend Station to be Closed.—The L.N.E.R. announces that Neepsend station will be closed on and from October 27. Parcels traffic will be dealt with at Sheffield Victoria station, from which point collection and delivery services will operate in the Neepsend district.

Bath & District Light Railway Company.—Notice is given in *The London Gazette* of October 15 by Mr. Arthur G. Dennis, the liquidator of the Bath & District Light Railway Co. Ltd., that a general meeting of the members of the company will be held at Bovingdon Grange, Bovingdon, Herts, on November 18 to receive the liquidator's report showing how the winding-up of the company has been conducted and its property disposed of. The light railway undertaking was a street tramway in Bath.

Westwood Station to be Closed.—The L.N.E.R. announces that Westwood station will be closed on and from October 27. Parcels and miscellaneous traffic by passenger train and consignments of goods train traffic for collection and delivery by L.N.E.R. road services will be dealt with at Chapel-town & Thorncliffe, from which station cartage services will operate in the Westwood district. Goods traffic not requiring cartage by L.N.E.R. services will be dealt with at Birdwell & Hoyland Common station.

Cheap Day Tickets from L.N.E.R. Stations.—The London Passenger Transport Board and the London & North Eastern Railway have announced that, beginning on October 27, cheap day tickets will be available between a number of L.N.E.R. stations in north London and London Transport stations in central London. The L.N.E.R. stations are: High Barnet, Totteridge & Whetstone, Woodside Park, West Finchley, Finchley Central, East Finchley, Highgate, Edgware, Mill Hill (The Hale), Mill Hill East, Alexandra Palace, Muswell Hill, and Cranley Gardens. Tickets will be available from them to 27 Underground stations in the central area, including Piccadilly Circus, Leicester Square, Tottenham Court Road, Oxford Circus, and Bond Street. Holders of these cheap day tickets may travel by way of either Archway or Finsbury Park. For the journey to London, cheap day

tickets may be used on any trains after 10 a.m. on weekdays and all day on Sundays and Public Holidays. The return journey may be made by any train on the day the ticket is issued.

Contracts and Tenders

During September the New Zealand Government placed orders for contracts to the value of £100,000 with Midland and Scottish firms, chiefly for electrical and railway material.

Class I railways in the United States on August 1 of this year had 168 locomotives on order, of which 115 were steam and 53 electric and diesel. On July 1, 1940, there were 124 locomotives on order, of which 97 were steam and 27 were electric and diesel. Locomotives on order on August 1, 1939, totalled 118, which included 72 steam and 46 electric and diesel.

The U.S.A. railways in the first seven months of this year placed in service 201 locomotives, of which 58 were steam and 143 electric and diesel. Installed in the corresponding months last year were 139 new locomotives, of which 20 were steam and 119 electric and diesel. Locomotives on lease are not included in the above figures.

On August 1, 1940, Class I railways in the United States of America had 19,765 freight wagons on order, states the Association of American Railroads. On July 1 they had 16,933 on order, and on August 1 of last year there were 8,473. The wagons on order on August 1 of this year included 11,565 box, 7,218 coal, 360 stock, 250 flat, 50 refrigerator, and 322 miscellaneous wagons.

In the first seven months of this year the U.S.A. railways put in service 40,416 new freight wagons, compared with 10,302 in the same period last year. Of the freight wagons placed in operation in the first seven months this year, there were 18,640 box 19,876 coal, 606 flat, 595 refrigerator, 88 stock, and 611 miscellaneous cars.

Forthcoming Meetings

Nov. 13 (Wed.).—**Bengal Dooars Railway Co. Ltd.** (Ordinary general), Gresham House, E.C., at 12.30 p.m.

Dec. 3 (Tues.).—**Buenos Aires Central Railroad & Terminal Company (Lacroze Subway)** (Annual ordinary), Corrientes 222, Buenos Aires, at 11 a.m.

Railway Stock Market

Despite the many difficulties of dealing arising from war conditions, there was again every indication of a firm underlying tone in most sections of the Stock Exchange. A steady volume of business in high-grade investment securities was reported, and partly because they remain very firmly held and are in short supply, prices tended to respond readily. Nevertheless, markets generally were again inactive, and the main factor governing sentiment was the continued absence of selling. British Funds lost part of their earlier strength, but home railway prior charges have shown some response to the recent rise in the latter; most of the debenture and guaranteed stocks still appear to be moderately valued. Earlier in the week there was also a much better tendency in junior securities, pending the news as to the decision in respect of increased charges. Moreover, the prevailing view is that publication of the full terms of the financial agreement with the Government should enable the situation to be much more clearly assessed. It is also being assumed that any revision of the agreement that might be proposed after the end of 1940 could hardly reduce the minimum payments guaranteed by the Exchequer. The substantial yields obtainable on junior stocks of the main line com-

panies are due partly to steadily rising costs of materials and operation, and partly to the uncertain factor of future air-raid damage. There seems little doubt, however, that current prices more than discount these factors. It is generally expected that in respect of the present year all preference stocks will receive their full dividends, with the exception of L.N.E.R. second preference, and that the full 5 per cent. is also likely to be paid on Southern preferred.

In response to the better tendency in securities of the main-line companies, Great Western ordinary rallied from 31½ to 33½, and the guaranteed stock at 104½ was a point better on balance. Great Western 5 per cent. preference further improved to 75½, and the 4 per cent. debentures were higher at 102. More attention was given to L.M.S.R. senior preference, which was 48, compared with 46 a week ago, and the 1923 preference made the better price of 35½; the ordinary stock was 13½. The guaranteed stock at 77 showed a rise of over two points. Moreover, L.M.S.R. 4 per cent. debentures, which were mentioned last week as appearing to give a generous yield, moved up to 93, a gain of two points.

Some demand was reported for L.N.E.R. debentures, and the 4 per cents. and 3 per

cents. at 83½ and 63½ respectively, each appreciated a point. L.N.E.R. guaranteed issues also moved in favour of holders, the first being 67½, and the second 57½. The first preference stock of the same company improved to 33, but the second preference again had a "middle" price of 10. Among Southern Railway issues various gains were also recorded; the preferred appreciated on the week from 40½ to 42, and the deferred from 9½ to 10½. The 5 per cent. preference was 73½, and the guaranteed stock rose by a point to 105½. Southern 4 per cent. debentures were 94, compared with 93½ a week ago, and yield fully 4½ per cent. London Transport "C" was better at 27½.

Among Argentine railway stocks, sentiment was influenced by the Central Argentine moratorium proposals. The 4 per cent. debentures of this company were marked down to 27 and the 5 per cent. debentures to 26; the 4½ per cent. preference stock was no better than 8½. In various other directions, slightly lower prices ruled, but very little selling of Argentine railway securities was reported. In other sections of the market San Paulo ordinary stock went back to 30, and Canadian Pacific preference stock was dealt in at 41½.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

Railways	Miles open 1939-40	Week Ending	Traffic for Week		No. of Weeks	Aggregate Traffic to Date			Shares or Stock	Prices						
			Total this year	Inc. or Dec. compared with 1939		Totals		Increase or Decrease		Highest 1939	Lowest 1939	Oct. 22, 1940	Yield % (See Note)			
						This Year	Last Year									
South & Central America																
Antofagasta (Chili) & Bolivia	834	13.10.40	£ 13,840	—	1,500	41	£ 700,170	£ 546,370	+	£ 153,800	Ord. Stk.	10½	4½	5	Nil	
Argentine North Eastern	753	12.10.40	ps. 166,100	—	ps. 16,100	15	ps. 2,618,400	ps. 2,705,300	—	ps. 86,900	"	4½	2	2	Nil	
Bolivar	174	Sept. 1940	3,790	—	510	39	35,970	38,350	—	2,380	6 p.c. Deb.	7½	5½	6½	Nil	
Brazil	—	—	—	—	—	—	—	—	—	Bonds	5½	4½	4½	Nil		
Buenos Ayres & Pacific	2,801	12.10.40	ps. 1,160,000	—	ps. 8,000	15	ps. 16,809,000	ps. 18,473,000	—	ps. 1,664,000	Ord. Stk.	5½	2	2	Nil	
Buenos Aires Central	190	10.8.40	\$99,500	—	\$31,600	6	\$557,500	\$647,500	—	\$90,000	"	10½	4	4	Nil	
Buenos Ayres Gt. Southern	5,082	12.10.40	ps. 1,760,000	—	ps. 77,000	15	ps. 27,827,000	ps. 28,597,000	—	ps. 770,000	Ord. Stk.	13½	4½	4½	Nil	
Buenos Ayres Western	1,930	12.10.40	ps. 677,000	—	ps. 19,000	15	ps. 9,317,000	ps. 10,431,000	—	ps. 1,114,000	"	10½	4	4	Nil	
Central Argentine	3,700	12.10.40	ps. 1,351,100	—	ps. 263,350	15	ps. 21,022,200	ps. 29,861,600	—	ps. 839,400	"	11½	4	3½	Nil	
Do.	—	—	—	—	—	—	—	—	—	Ord.	4	1½	2	Nil		
Cent. Uruguay of M. Video	972	12.10.40	£ 17,826	+	565	15	£ 268,569	£ 253,358	+	£ 15,211	Ord. Stk.	2½	1½	1½	Nil	
Costa Rica	188	May 1940	17,282	—	7,020	48	193,339	245,516	—	52,177	Stk.	24½	18	17½	11½	
Dorada	70	Sept. 1940	12,200	—	2,200	39	110,700	123,700	—	13,000	1 Mt. Db.	104½	102	98	6½	
Entre Rios	810	12.10.40	ps. 231,400	+	ps. 9,200	15	ps. 3,582,900	ps. 4,064,000	—	ps. 481,100	Ord. Stk.	6	3	1½	Nil	
Great Western of Brazil	1,016	12.10.40	£ 12,400	—	400	41	£ 401,500	£ 333,600	+	£ 67,900	Ord. Sh.	3/-	1/2½	1½	Nil	
International of Cl. Amer.	794	Aug. 1940	\$354,854	—	\$70,916	35	\$4,079,630	\$4,123,397	—	\$43,767	"	7½d.	7½d.	—	Nil	
Interoceanic of Mexico	—	—	—	—	—	—	—	—	—	1st Pref.	7½d.	7½d.	—	Nil		
La Guaira & Caracas	224	Sept. 1940	8,240	+	2,485	39	60,300	55,105	+	5,195	"	2½	1½	1½	Nil	
Leopoldina	1,918	5.10.40	27,525	+	3,705	10	906,496	821,207	+	85,289	Ord. Stk.	2½	1½	1½	Nil	
Mexican	483	7.9.40	ps. 218,900	—	ps. 48,100	10	ps. 2,606,300	ps. 2,736,600	—	ps. 130,300	"	18	4	4	Nil	
Midland of Uruguay	319	Aug. 1940	11,140	+	2,792	9	21,363	17,490	+	3,873	"	—	—	—	Nil	
Nitrate	386	15.10.40	5,599	—	863	41	140,684	93,744	+	46,940	Ord. Sh.	2½	1½	1½	7½	
Paraguay Central	274	12.10.40	\$2,840,000	—	\$189,000	15	\$53,439,000	\$50,610,000	—	\$2,829,000	Pr. Li. Stk.	45½	36	38	15½	
Peruvian Corporation	1,059	Sept. 1940	63,848	—	2,527	13	198,447	192,214	—	6,233	Pref.	1½	1½	1½	Nil	
Salvador	100	17.8.40	49,110	+	41,629	7	672,114	675,464	—	43,350	"	—	—	—	Nil	
San Paulo	153½	29.9.40	30,000	—	4,387	39	1,426,392	1,262,893	+	163,499	Ord. Sh.	38	20	30½	8½	
Taltal	160	Aug. 1940	2,465	—	335	9	4,550	3,685	+	865	Ord. Sh.	1½	6/6	—	9½	
United of Havana	1,353	12.10.40	13,427	—	2,807	15	233,126	270,628	—	37,502	Ord. Stk.	2	1½	1½	Nil	
Uruguay Northern	73	Aug. 1940	970	+	144	9	1,900	1,650	+	250	"	—	—	—	Nil	
Canada																
Canadian National	23,695	14.10.40	971,708	—	34,507	41	37,655,133	30,428,912	+	7,226,221	Perp. Dbs.	74½	60	74	5½	
Canadian Northern	—	—	—	—	—	—	—	—	—	4 p.c. Gar.	100½	76	102	3½	Nil	
Grand Trunk	—	—	—	—	—	—	—	—	—	Ord. Stk.	7½	3½	5½	—	Nil	
Canadian Pacific	17,153	14.10.40	660,200	—	79,200	41	25,768,400	22,701,600	+	3,066,800	"	—	—	—	Nil	
India																
Assam Bengal	1,329	30.4.40	45,187	+	6,529	4	135,060	120,437	+	14,623	Ord. Stk.	76½	40	76½	3½	Nil
Barak Light	202	31.8.40	2,557	—	203	22	64,620	51,052	+	13,568	"	—	—	—	Nil	
Bengal & North Western	2,091	Sept. 1940	223,650	+	46,363	26	1,485,502	1,253,721	+	231,790	Ord. Stk.	277	229½	239	6½	Nil
Bengal Doonars & Extension	161	Sept. 1940	14,625	—	508	26	78,405	66,243	+	12,162	"	91	84½	92½	3	Nil
Bengal-Nagpur	3,269	10.8.40	204,075	+	16,707	19	3,079,954	2,834,428	+	245,526	"	94½	83½	92½	4½	Nil
Bombay, Baroda & Cl. India	2,986	10.10.40	257,325	—	35,850	27	5,028,075	4,464,000	+	564,075	"	108	90	104½	5½	Nil
Madras & Southern Mahratta	2,967	31.8.40	160,350	+	5,016	22	2,522,079	2,484,222	+	37,857	"	104½	92	99½	7½	Nil
Rohilkund & Kumaon	571	Sept. 1940	38,925	+	4,219	26	323,231	259,075	+	64,156	"	280	263	250	6½	Nil
South Indian	2,542	20.8.40	111,501	+	11,077	20	1,744,085	1,617,362	+	126,723	"	102½	88	84½	5½	Nil
Various																
Beira	204	Aug. 1940	85,336	—	—	48	832,782	—	—	—	Pr. Sh.	1½	1½	1½	Nil	
Egyptian Delta	623	31.7.40	5,048	—	914	18	56,624	61,673	—	5,049	"	—	—	—	Nil	
Kenya & Uganda	1,625	—	—	—	—	—	—	—	—	—	B. Deb.	55	39	47½	7½	Nil
Manila	—	—	—	—	—	—	—	—	—	—	Inc. Deb.	91½	87½	82½	4½	Nil
Midland of W. Australia	277	July 1940	11,397	+	139	4	11,397	11,258	+	139	"	—	—	—	Nil	
Nigerian	1,900	31.8.40	27,727	+	3,258	22	783,893	601,488	+	182,405	"	—	—	—	Nil	
Rhodesia	2,442	Aug. 1940	512,446	—	—	48	4,428,678	—	—	—	"	—	—	—	Nil	
South Africa	13,287	21.9.40	704,505	+	7,989	25	16,865,140	16,126,961	+	738,179	"	—	—	—	Nil	
Victoria	4,774	June 1940	797,185	+	103,739	52	9,942,449	9,360,329	+	582,120	"	—	—	—	Nil	

Note. Yields are based on the approximate current prices and are within a fraction of ½. Argentine traffics are now given in pesos.
* Quotation is of June 17, 1940; dealings subsequently prohibited. † Receipts are calculated @ 1s. 6d. to the rupee.